FOREST PRACTICES BRANCH

2001 Summary of Backlog NSR and Impeded Forest Land

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National Library of Canada Cataloguing in Publication Data
Main entry under title:
Summary of backlog NSR and impeded forest land. — 2001–

Irregular.
Title from cover.
Co-published by: Forest Renewal BC.
Continues: Summary of backlog not satisfactorily restocked forest land. ISSN 1488-0822.
ISSN 1499-1225 = Summary of backlog NSR and impeded forest land

1. Reforestation – British Columbia – Statistics – Periodicals. 2. Forest management – British Columbia – Statistics – Periodicals. I. British Columbia. Forest Practices Branch. II. Forest Renewal BC. III. Title: Summary of backlog not satisfactorily restocked and impeded forest land.

SD146.B7S95 333.75'11'0971105 C2001-960194-8

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Executive Summary

The 1984 Forest and Range Resource Analysis estimated that there were 738 000 hectares of good and medium site Crown land that had been harvested, burned by wildfire, destroyed by pests or other damage and were classified as backlog (pre-1982) not satisfactorily restocked (NSR). These areas were considered economically viable for timber production and given a high priority for silviculture activities. In 1995, the *Forest Practices Code of British Columbia Act* re-defined a backlog area as "an area from which the timber was harvested, damaged or destroyed before October 1, 1987; and, which in the district manager's opinion, is insufficiently stocked with healthy, well-spaced trees of a commercially acceptable species." Therefore, summary reports produced prior to that date included only pre-82 backlog NSR, while subsequent reports include information on both pre-82 and 1982–87 backlog NSR.

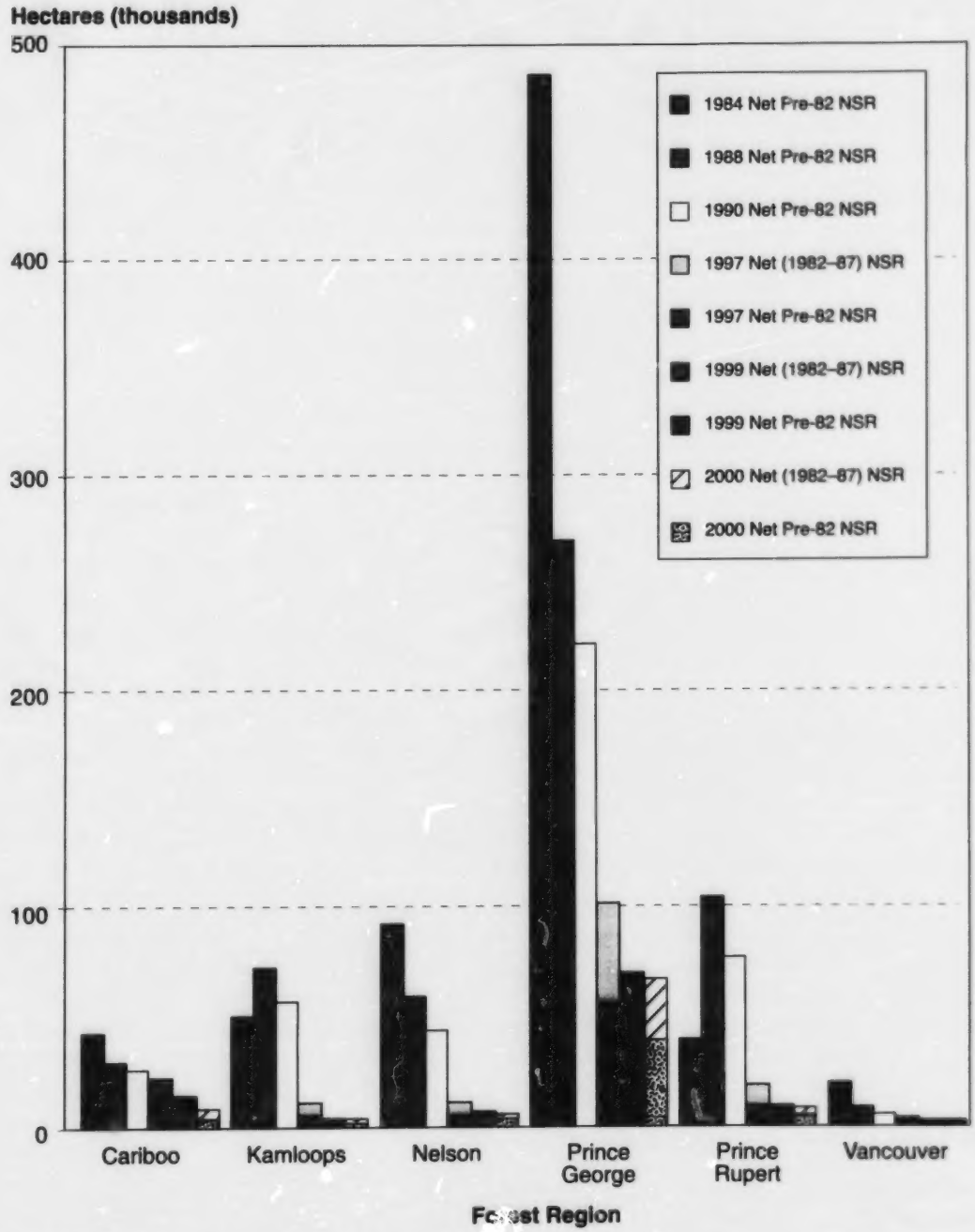
The present summary indicates that as of February 2001, there were 55 421 hectares of treatable pre-1982 backlog NSR remaining on good and medium sites, and 40 548 hectares of treatable 1982–87 good, medium and poor site backlog NSR on Crown land in British Columbia. Reductions in the amount of backlog NSR land during recent years can be attributed to reclassification of NSR sites to satisfactorily restocked or not productive as well as to reforestation programs. Since 1996, this has been carried out with funding provided by Forest Renewal BC (FRBC).

The 1984 estimate of 738 000 hectares of backlog NSR on Crown land was the motivation for the 1985–1990 Canada–British Columbia Forest Resource Development Agreement (FRDA). Under FRDA, there was an increase in reforestation activities on backlog NSR areas. Increased site preparation, planting and silviculture surveys decreased the area classified as backlog NSR. Modifications in survey procedures and in silviculture stocking standards also resulted in less land being classed as backlog NSR. As FRDA wound down in 1990, the Ministry of Forests continued to address the backlog areas at a somewhat reduced rate. Between 1990 and 1996, funding began to shift away from planting and toward plantation maintenance activities such as brushing.

In 1994, FRBC was established to plan and implement a program of investment to, in part, "renew the forest economy of B.C." Part of the FRBC program was to invest in projects that help to reduce the amount of backlog NSR. In August 1996, Forest Renewal BC agreed to fund a ten-year, $250 million backlog reforestation program. With this commitment, it was estimated that planting of backlog sites would be completed by 2002, or earlier wherever possible. In spite of this commitment, however, planting of backlog NSR sites has dropped off since 1996 to around 9000 ha/year. Current estimates are that backlog NSR is likely to be eliminated in the Cariboo, Kamloops, and Nelson Forest Regions by 2005–2006, and somewhat earlier in the Vancouver Region. In the Prince Rupert and Prince George Forest Regions, backlog NSR is estimated to be eliminated no earlier than 2007.

As the amount of backlog NSR land diminishes, the focus of the program is shifting towards bringing the backlog landbase to free growing. In the current five-year backlog management plan, approximately half the funding has been allocated for treatment of "impeded" stands that are satisfactorily restocked, but not yet free growing. Approximately 2.4 million hectares are currently classified as impeded. Estimates of the completion date for bringing all backlog areas to free growing ranges from 2015 to 2025 in different parts of the province.

Trends in Net Backlog NSR by Region



Net pre-1982 backlog NSR includes good and medium sites only.
Net 1982–87 backlog NSR includes good, medium and poor sites.

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Summary of Provincial Backlog NSR Land

This report updates the *1999 Summary of Backlog Not Satisfactorily Restocked Forest Land* published by the Ministry of Forests and uses the same methodology and format as the 1988, 1990, and 1997 reports. While early reports discussed only pre-1982 backlog NSR, reports since 1997 also include statistics on 1982–87 backlog NSR.

Backlog NSR Defined

The term "not satisfactorily restocked" and its acronym NSR are used to describe forest lands that are not growing to their full potential due to insufficient stocking of acceptable tree species. The Ministry of Forests Backlog Management Policy defines backlog NSR as productive forest land that was denuded prior to 1987 and has not been regenerated to the desired stocking standards for the opening.

Specific definitions of NSR have changed over time and have been periodically redefined as survey procedures and management objectives evolved. Today, in British Columbia, the stocking status of any given area is evaluated on the basis of site-specific standards that define preferred and acceptable tree species, as well as target and minimum stocking levels. The criteria and standards used to determine NSR lands have been developed from ongoing research. In order for a tree species to be considered preferred or acceptable for restocking a site, it must be ecologically suitable and economic to harvest and utilize.

Changing market conditions can dramatically affect the acceptability of a tree species for restocking sites, and consequently, forest land status. For example, recent changes in market demands and utilization of aspen have made this species acceptable for restocking specific ecosystems in northeastern British Columbia. Areas previously stocked with aspen and called NSR are now being reclassified as satisfactorily restocked if sufficient numbers of aspen occur on site.

In addition, the Ministry of Forests Backlog Management Policy recognizes that certain areas will never reach the current free growing standards under present economic or biological constraints, and that further investments cannot be justified or may not be appropriate. In the case of NSR areas where further investments cannot be justified, the NSR label is replaced with an accurate inventory label. This new label acknowledges that the NSR area is untreatable for social, economic or environmental reasons or the stocking is appropriate in view of the need to achieve non-timber resource objectives (e.g., fisheries, wildlife, range or recreation).

Areas that are classed as NSR are considered not to be contributing to the forest's growing stock, although they may still contribute to other resource values. If left untreated they influence future timber supply and allowable annual cut levels. The estimate of backlog NSR is used to determine the level of silviculture activity required to convert NSR lands to a satisfactorily restocked status.

NSR is a broad term and does not describe the silvicultural regime, operability or treatment priority for a given site. Denuded areas have differing levels of disturbance, site quality, vegetative cover and resource potential. Some of these factors will also change with time. Therefore, NSR estimates are adjusted in order to produce a silviculturally meaningful statistic, one that can be used to plan and implement reforestation activities.

This summary incorporates the use of a "net-down" process to reduce gross NSR estimates to net NSR figures.

Gross Not Stocked Forest Land

Resources Inventory Branch estimates that there are about 2.8 million hectares of not stocked Crown land that originated from harvesting, wildfire, pests and other causes (Table 1). This estimate includes both pre- and post-1987 disturbances. A large portion of the gross backlog not stocked land is classified as non-commercial brush and timber, inaccessible, uneconomic or it is on low or poor site class land. Much of this land requires reclassification surveys.

Pre-1982 Backlog NSR

About 79 000 hectares are classified as pre-1982 gross good and medium site backlog NSR as defined in this report (Table 1). Only the good and medium site backlog NSR was considered for reforestation funding under the 1985–90 Canada–British Columbia Forest Resource Development Agreement (FRDA).

1982–1987 Backlog NSR

The estimated gross backlog NSR area originating from harvesting, wildfire, pests and other causes, occurring between

Summary of Provincial Backlog NSR Land

January 1, 1982 and October 1, 1987, is 60 708 hectares (see Appendix 3, page 56). Of this amount, the gross backlog on good, medium and poor sites is 59 881 hectares (Table 1). Under the Industry and Ministry Outstanding program, reforestation funding priority was given to all harvested areas, and the good, medium and poor sites that were destroyed by wildfire, pests or other natural disturbances.

Backlog NSR Net-down Description

The estimate of net backlog NSR on Crown lands was determined through the application of a net-down procedure, which made deductions for areas that were considered likely to be naturally regenerated or areas that had low economic operability. Appendix 3 details the net-down deductions by forest region.

The net backlog NSR land in this report excludes NSR areas that were:

- remote and lacking access such as wildfire burns in the northern interior;
- harvested by selection, shelterwood and seed tree systems and designed to regenerate naturally;
- older regenerated stands with sufficient numbers of well-spaced crop trees per hectare;
  - stands having an average age of less than 12 years with stocking levels greater than 700 well-spaced stems per hectare;
  - stands having an average age of more than 12 years with stocking levels greater than 500 well-spaced stems per hectare;
- NSR areas less than five hectares in size;
- pre-1982 – in poor and low site productivity classes;
- 1982–87 – in low productivity class.

Net Backlog NSR

This summary indicates that 55 421 hectares of pre-1982 backlog NSR are on good and medium sites and are potential candidates for silviculture activities.

Likewise, Table 1 shows that 40 548 hectares of 1982–87 backlog NSR are on good, medium and poor sites and available for silviculture treatment.

The 1984 *Forest and Range Resource Analysis* estimated that there were 738 000 hectares of good and medium site net backlog NSR land in the province (Table 2). The 1988, 1990, 1997, and 1999 Backlog NSR Summaries reported that this area had been reduced by 25%, 41%, 87%, and 91%, respectively. This report shows that, over the last 17 years (since 1984), there has been a 682 578 hectare (92%) reduction in good and medium site pre-1982 backlog NSR land.

Factors Responsible for Backlog NSR Reductions

Reductions in backlog NSR land can be attributed to reclassification of NSR sites to satisfactorily restocked (SR) or not productive (NP) and to reforestation programs on backlog sites. Much of the land that has been reclassified to SR, has regenerated naturally (see figures on page 10 and 11).

Large programs to survey, plant and treat backlog NSR sites were funded by FRDA from 1985–90, and by the Ministry of Forests from 1990–96. During 1990–96, funding began to shift away from planting, and towards activities (e.g., brushing) aimed at maintaining existing plantations (refer to figures on pages 12 and 13). In 1996, FRBC became responsible for funding activities aimed at reducing backlog NSR, and committed $250 million over a ten-year period. At this time, it was projected that backlog NSR would be eliminated by the year 2002. Under the new funding arrangement, surveying and brushing programs have continued at levels similar to previous years, but planting programs have been reduced considerably. As a result, the rate at which backlog NSR is being reduced has dropped. It is now estimated that backlog NSR in B.C. will be eliminated no earlier than 2007.

Summary of Provincial Impeded Land

This edition of the backlog summary report is the first to include a summary of backlog land that is satisfactorily restocked (SR), but not yet free growing or declared free growing (impeded). The relative prominence of free growing information in these annual summary reports will increase as NSR land is gradually phased out.

Defining the Impeded Landbase

After backlog areas are satisfactorily restocked, they must be managed to the stage of healthy, free growing stands. Those backlog areas that, in the District Manager's opinion, are SR with healthy, well-spaced trees of a commercially acceptable species, but are not free growing or not yet declared free growing, are classified as "impeded." For this report, the figure of 2 370 389 hectares impeded land was arrived at by deducting NSR and inoperable area from the gross not free growing pre-1987 area of 2 597 174 hectares. We expect this estimate will be substantially reduced in the next report, however, as a result of more complete survey information. Many areas may actually have reached free growing, but they have either not been surveyed or the survey results have not yet been entered into the Ministry of Forests Integrated Silviculture Information System (ISIS) database.

Treatment of the Impeded Landbase

After the impeded landbase is accurately defined, it will be necessary to prioritize areas throughout the province for silvicultural treatments. Brushing is the most common treatment that will be applied to impeded sites to enable them to become free growing, but some spacing treatments will also be carried out. Forest policy and funding arrangements regarding the application of silvicultural treatments varied considerably for sites harvested prior to 1987. Consequently, current expectations about how responsive sites will be to further brushing treatments varies according to the harvest date. The level of response is also expected to vary according to site quality. Tools for prioritizing sites for treatment according to their expected responsiveness are currently being developed.

In this report, impeded area is categorized according to disturbance date.

Pre-1970 *without* FRDA investment

These areas were disturbed prior to 1970, but did not receive treatment as a result of FRDA funding. It is questionable whether these areas should continue to be tracked, as most are far too old to consider for reforestation treatments. Many of these sites were not treated under the FRDA agreement because they are of poor or low site quality or were already too old. There are currently 384 123 hectares of impeded land in B.C. that were disturbed prior to 1970, and which did not receive treatment as a result of FRDA funding. This is 16% of the total impeded landbase.

Pre-1970 *with* FRDA investment

These areas were disturbed prior to 1970, and received some treatment as a result of FRDA funding. Trees are therefore expected to be in better condition, and more responsive to further vegetation management treatments. Sites that received FRDA funding were of good or medium site quality, and so the projected return is likely to make brushing investment worthwhile. At present, there are 204 502 hectares of impeded land in this category, which is 9% of the total impeded landbase.

1970–1982

Areas harvested during this period received silvicultural treatments in a somewhat arbitrary fashion because reforestation standards were less strictly adhered to than currently occurs. These stands are less likely to be as responsive to brushing than those that were harvested from 1982–1987. There are currently 946 236 hectares of impeded land in B.C. that were disturbed between 1970 and 1982. This is 40% of the total impeded landbase.

1982–1987

Areas harvested during this period were previously classified as "Ministry or Industry Outstanding" and generally received a high level of compliance to regeneration standards. These stands are therefore likely to be in better condition than those harvested prior to 1982, and are expected to be more responsive to brushing treatments. There are currently 835 528 hectares of impeded land in B.C. that were disturbed between 1982 and 1987. This is 35% of the total impeded landbase.

Funding Requirements for Bringing Impeded Stands to Free Growing

Bringing impeded stands to free growing will require an ongoing, long-term funding commitment. Under the current five-year backlog plan, approximately half the funding requirements (more than $110 million) are directed towards that end. Until the impeded land base is more accurately defined, however, it is difficult to determine the necessary long-term financial commitment required for this program.

Sources of Information

This report details the backlog NSR and impeded land by forest region, timber supply area and tree farm licence (Appendix 2).

The data used to produce the charts and summary tables that follow were obtained from several sources:

1. Estimates available at the time of signing the 1985–1990 Canada–British Columbia Forest Resource Development Agreement indicated that there were 644 522 hectares of good and medium site backlog NSR in the province. In 1984,[1] the Ministry produced updated information indicating that the net backlog NSR was 738 000 hectares (Table 2). This estimate was confirmed and published in *Renewal* in 1986.[2]
2. Data on the total forest land and total gross NSR (Table 1) comes from the 1998/99 *Ministry of Forests Annual Report*. This information was submitted by the Ministry of Forests Resources Inventory Branch.
3. Data for the backlog NSR on tree farm licences (TFL) were derived from hand compiled TFL reports. The status of the impeded landbase is currently not available on TFLs.
4. Data for the gross good and medium site backlog NSR on timber supply areas were derived from ISIS. Data for the net NSR were derived from the gross area totals after deductions were made for areas considered to be inoperable, selectively logged (and likely to regenerate naturally), less than 12 years old with more than 700 well-spaced stems per hectare, or areas that were more than 12 years old with more than 500 well-spaced stems per hectare, and areas less than five hectares in size.
5. ISIS was used to derive the net backlog NSR and impeded area on TSAs for all regions. The intent of using ISIS for deriving these numbers is to:
   a) provide summaries on a consistent and auditable basis of the net backlog NSR and impeded area identified in this report;
   b) record ongoing reforestation activities and any changes in forest land status that result from these activities; and
   c) monitor the change in forest land stocking status through silviculture activities funded under special funding source (e.g., FRBC).

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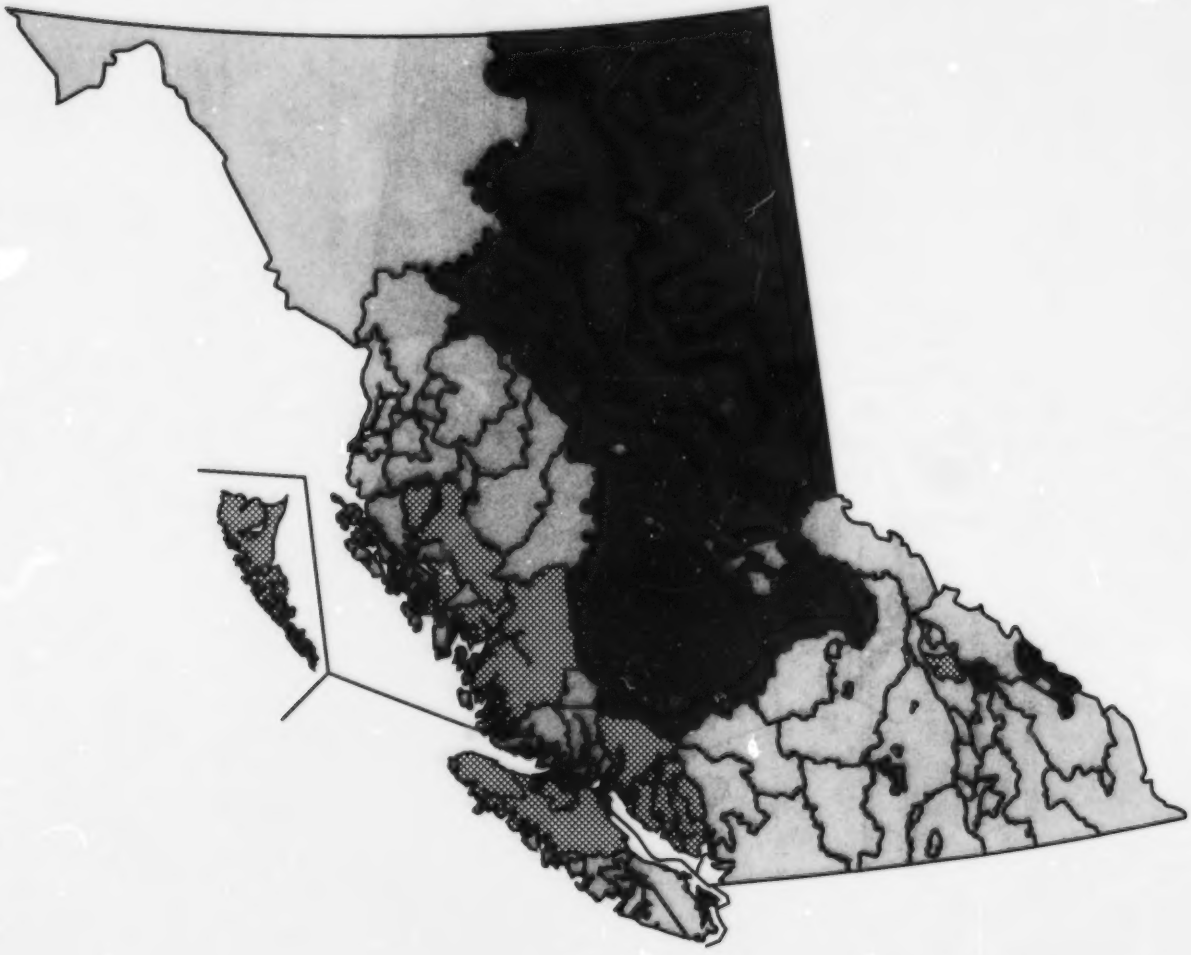
1 Forest and Range Resource Analysis, 1984. Ministry of Forests.

2 *Renewal*, 1986. Vol. 1, No. 1. Fall 1986.

Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land[a] by TSA and TFL

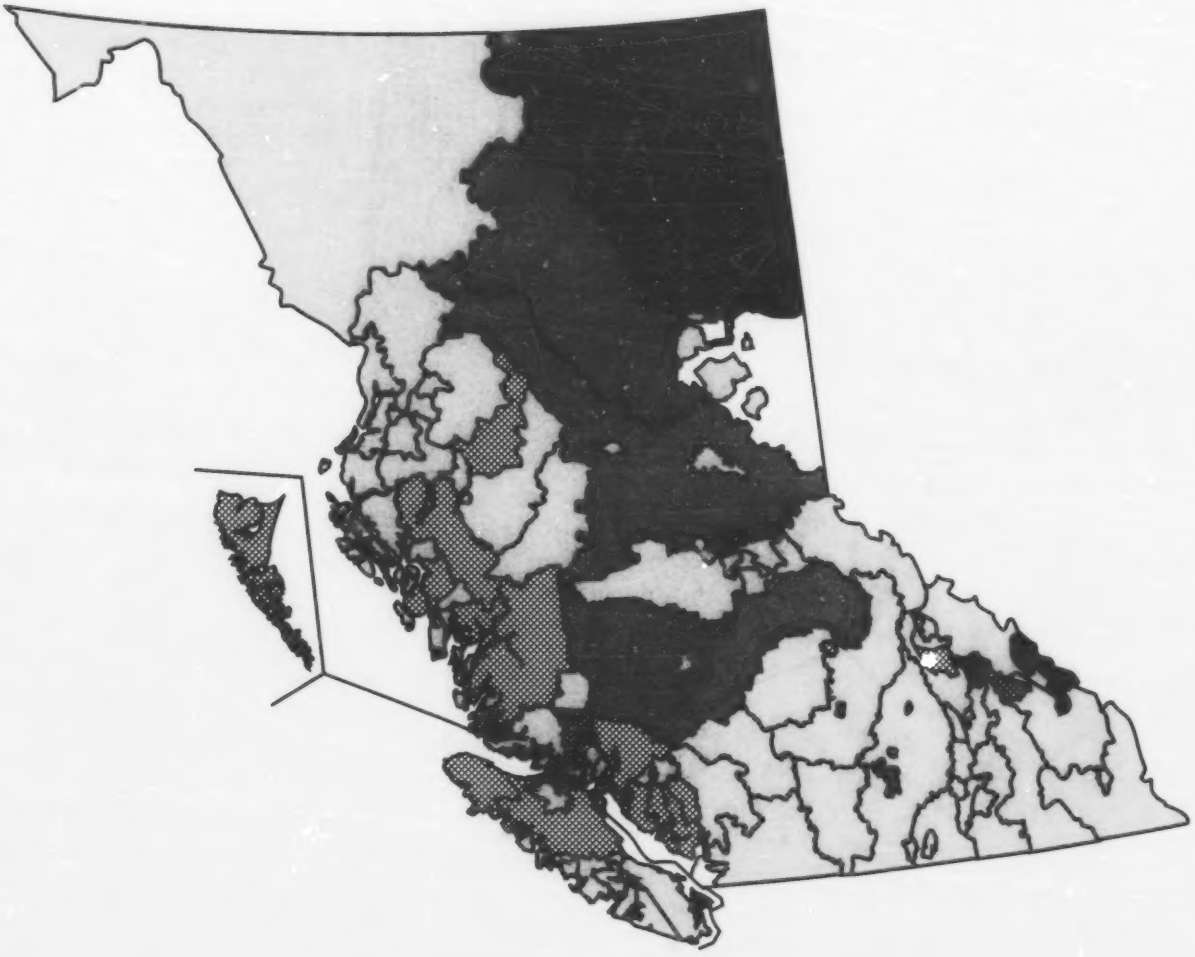


Good and Medium Site Net Backlog NSR

- 0 ha
- 0–2 thousand ha
- 2–4 thousand ha
- 4–6 thousand ha
- 6–8 thousand ha
- 8–10 thousand ha
- 10–12 thousand ha
- Federal land

[a] NSR – not satisfactorily restocked

Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land[a] by TSA and TFL



Good and Medium Site Net Backlog NSR

- 0 ha
- 0–2 thousand ha
- 2–4 thousand ha
- 4–6 thousand ha
- 6–8 thousand ha
- 8–10 thousand ha
- 10–12 thousand ha
- 12+ thousand ha
- Federal land

[a] NSR – not satisfactorily restocked

TABLE 1. Summary table of British Columbia productive forest land statistics

Region	Inventory database[a]		Gross backlog NSR[b,c]		Net backlog NSR[b,d]	
	Total productive forest land	Total not stocked forest land[e]	Pre-1982 (good, med.)	1982–87 (good, med., poor)	Pre-1982 (good, med.)	1982–87 (good, med., poor)
	(area in hectares)					
Cariboo	5 606 000	288 000	6 001	5 672	3 660	4545
Kamloops	4 555 000	202 000	3 183	3 598	1 758	2 175
Nelson	3 383 000	175 000	8 402	6 983	3 753	1 988
Prince George	17 792 000	1 526 000	44 934	34 882	39 233	28 057
Prince Rupert	9 309 000	468 000	14 630	7 979	5 413	3 156
Vancouver	6 031 000	166 000	1 810	767	1 605	628
Provincial total	**46 676 000**	**2 826 000**	**78 960**	**59 881**	**55 422**	**40 549**

[a] Source: Ministry of Forests 1998/99 Annual Report.
[b] Sources: ISIS and hand compiled TFL submissions.
[c] Areas denuded due to harvesting, wildfire and other causes (including pest damage, flood and blowdown from wind).
[d] Net area after deductions for inoperable, inaccessible and low economic priority areas.
[e] Total productive and available forest land that is not stocked; it includes both pre- and post-1987 disturbances.

TABLE 2. Provincial summary of the net backlog[a] of not satisfactorily restocked land for good and medium pre-1982 sites, and for good, medium and poor 1982–87 sites

Region	Pre-1982 summaries (good and medium sites)							1982–87 summaries (good, medium and poor sites)			
	1984 Resource analysis[b]	1988[c]	1990[d]	1997[d]	1999[d]	2000[d]	Difference in 1984 and 2000 summaries (%)	1997[d,e]	1999[d]	2000[d]	Difference in 1997 and 2000 summaries (%)
	(area in hectares)										
Cariboo	43 400	30 747	26 346	11 974	8 560	3 660	-92	12 223	6 651	4 545	-63
Kamloops	51 400	74 241	57 869	6 261	2 148	1 758	-97	5 040	2 542	2 175	-57
Nelson	93 700	60 787	44 273	5 906	4 805	3 753	-96	5 047	2 783	1 988	-61
Prince George	488 700	271 747	224 205	57 215	46 341	39 233	-92	43 623	24 188	28 057	-36
Prince Rupert	40 500	106 396	78 130	10 720	5 309	5 413	-87	9 681	4 025	3 156	-67
Vancouver	20 300	9 227	5 868	1 742	1 694	1 605	-92	3 022	1 015	628	-79
Provincial totals	**738 000**	**553 145**	**436 691**	**93 818**	**68 857**	**55 422**	**-92**	**78 636**	**41 204**	**40 549**	**-48**

[a] Net NSR after deductions as per Appendix 3.
[b] The 1984 *Range and Resource Analysis* indicated that there remained a provincial total of 272 975 hectares of good and medium site NSR (applies to pre-1982 NSR only).
[c] 1988 *Summary of Backlog Not Satisfactorily Restocked Forest Land* (applies to pre-1982 NSR only).
[d] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and ISIS.
[e] These values represent 1982–87 backlog NSR remaining in 1995/96. The definition of backlog NSR was changed in the Forest Practices Code (1995) to include areas denuded from 1982–87.

Provincial Summary of Impeded Area

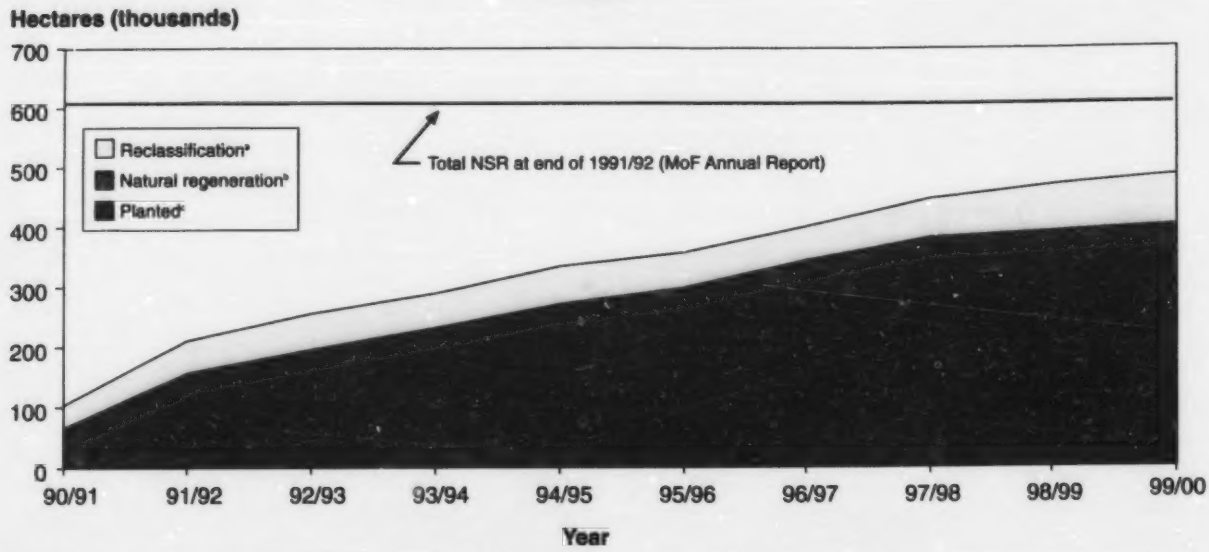
TABLE 3. Provincial summary of impeded[a] area for pre-1970 (not FRDA-funded), pre-1970 (FRDA-funded), 1970–1982, and 1982–1987 sites (including good, medium, poor, and low sites)

Region	Gross not free growing pre-1987[b]	Impeded area (ha)[c]				
		1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
Cariboo	357 875	152 632	133 179	19 583	36 596	341 990
Kamloops	354 016	102 322	165 864	21 709	42 241	332 136
Nelson	348 140	120 769	146 013	26 362	31 551	324 695
Prince George	1 111 041	293 650	390 748	80 507	231 341	996 246
Prince Rupert	295 554	116 289	72 543	23 055	33 573	245 460
Vancouver	130 548	49 866	37 889	33 286	8821	129 862
Provincial total	**2 597 174**	**835 528**	**946 236**	**204 502**	**384 123**	**2 370 389**

[a] Impeded land is satisfactorily restocked, operable area, but not free growing or "not declared free growing."*
[b] Gross not free growing pre-1987 is the total area before deductions of NSR and net downs.
[c] Based on information extracted from ISIS.
* Use of the term "not declared free growing" is based on the assumption that a portion of the older backlog areas are in a free growing condition but have not yet been coded as such in the ISIS database.

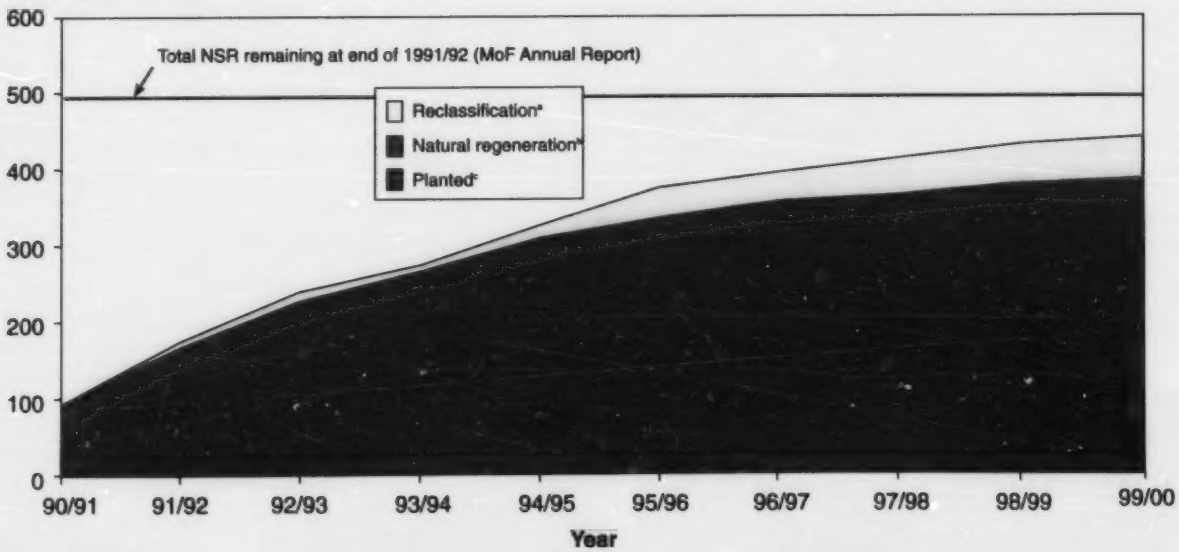
Changes in Backlog NSR Land Classification

Changes in Pre-82 NSR
All Sites



a Equals NSR area reclassified as NP minus openings caused by fire and pests to free growing areas
b Equals natural regeneration minus natural regeneration failure
c Equals planting minus plantation failures

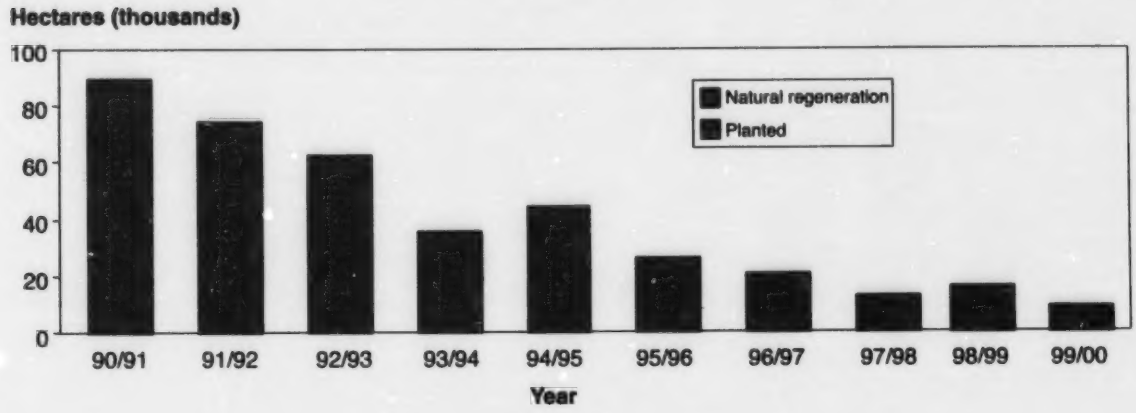
Changes in 1982–87 NSR
All Sites



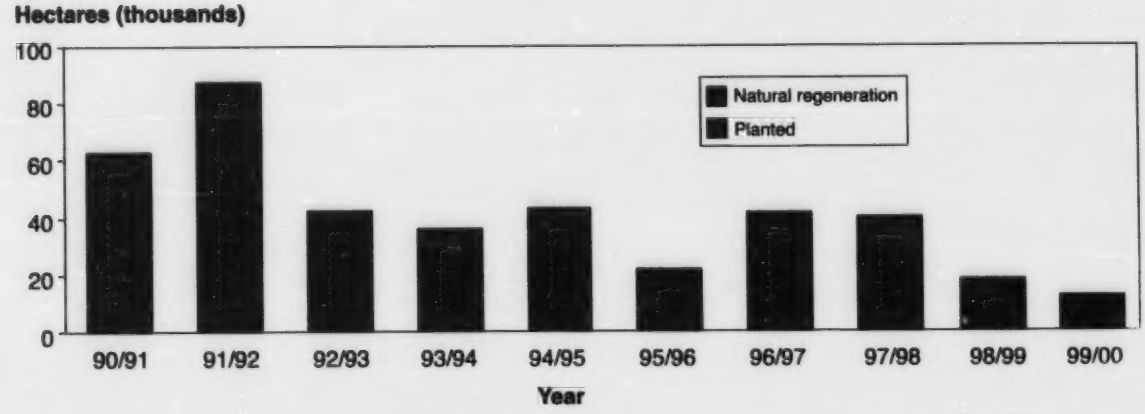
a Equals NSR area reclassified as NP minus openings caused by fire and pests to free growing areas
b Equals natural regeneration minus natural regeneration failure
c Equals planting minus plantation failures

Reductions in Backlog NSR as a Result of Planting and Natural Regeneration

Reductions in 1982–87 NSR
as a Result of Planting and Natural Regeneration
All Sites

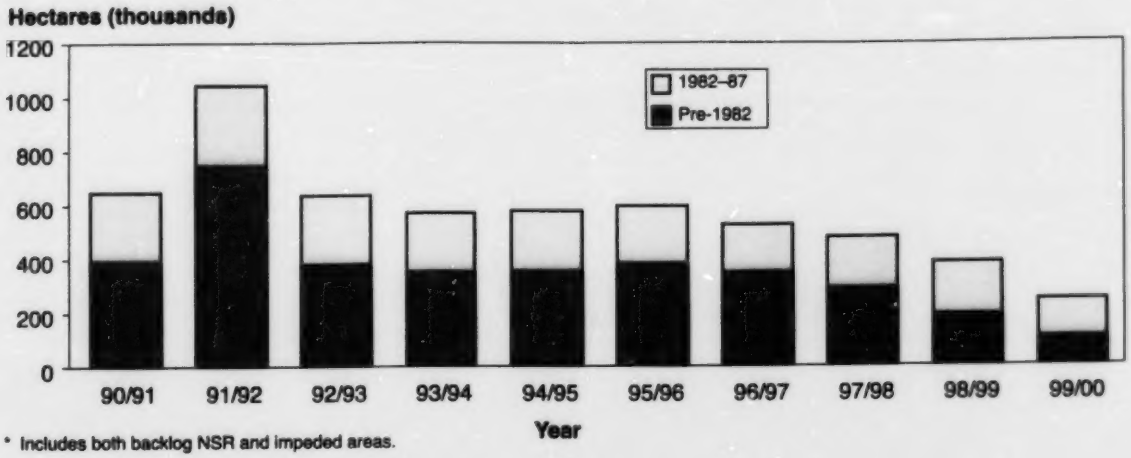


Reductions in Pre-1982 NSR
as a Result of Planting and Natural Regeneration
All Sites



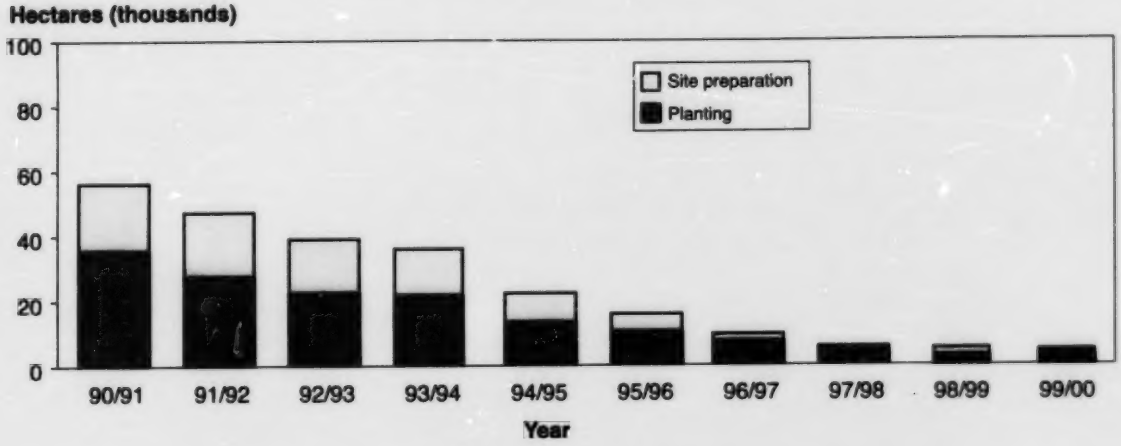
Silviculture Activities on Backlog Land

Silviculture Surveys on Backlog Areas*

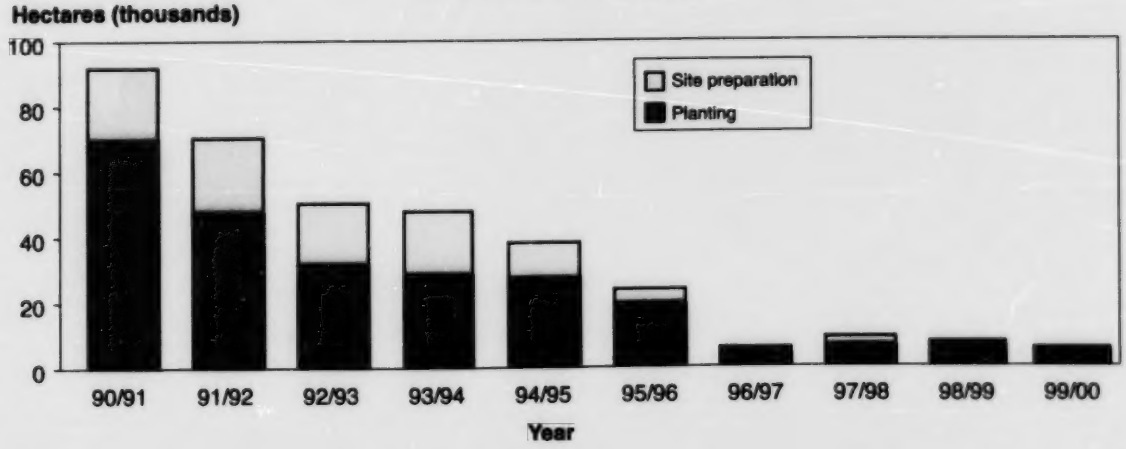


* Includes both backlog NSR and impeded areas.

Planting and Site Preparation on Pre-1982 Backlog Areas

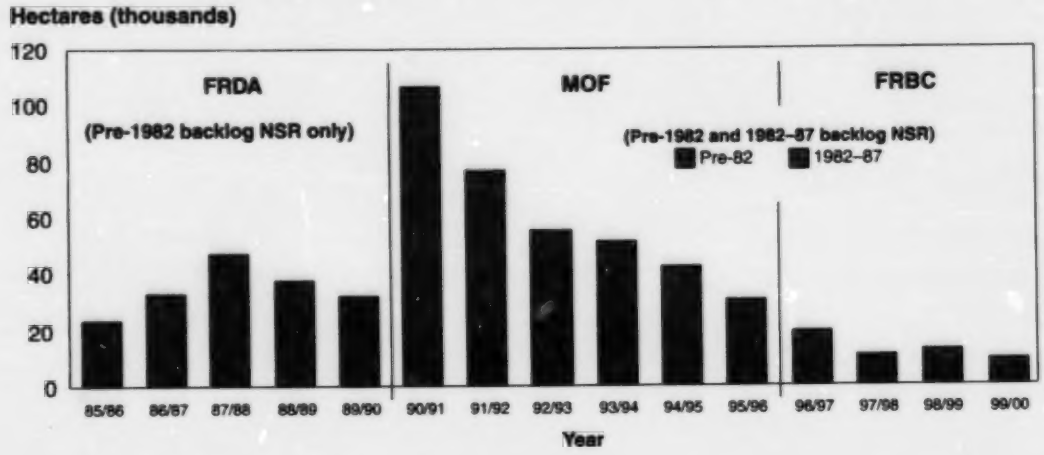


Planting and Site Preparation on 1982–87 Backlog Areas

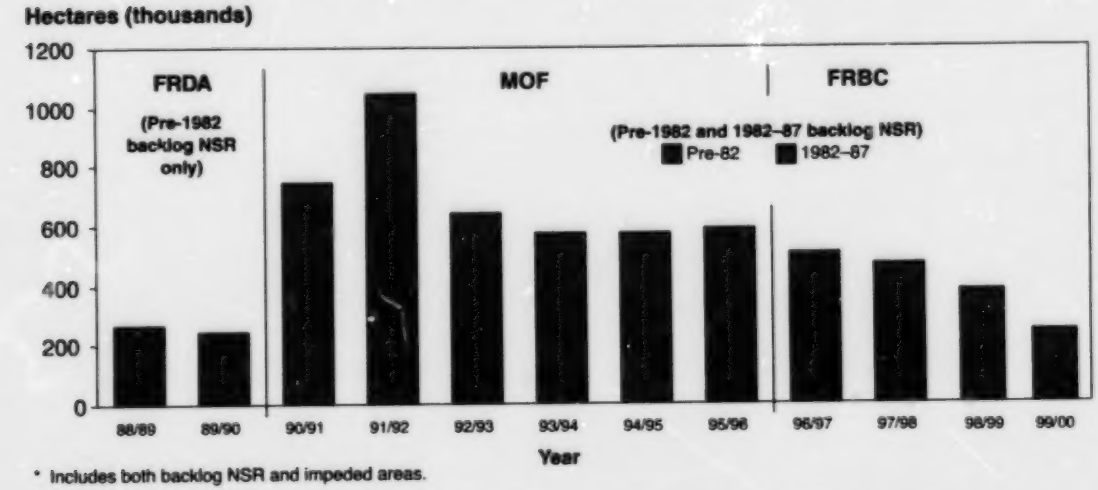


Silviculture Activities on Backlog Land

Backlog Area Planted Under Various Funding Arrangements

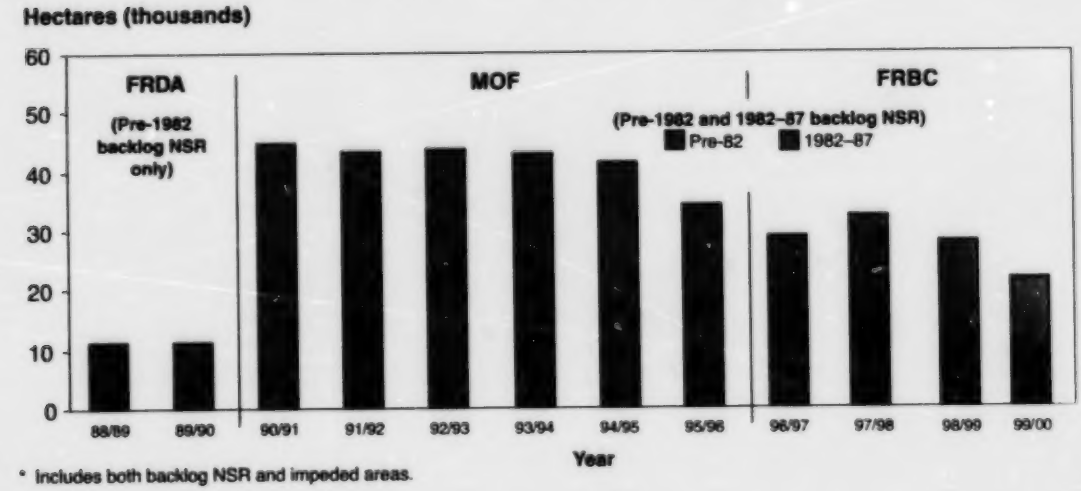


Backlog Area* Surveyed Under Various Funding Arrangements



* Includes both backlog NSR and impeded areas.

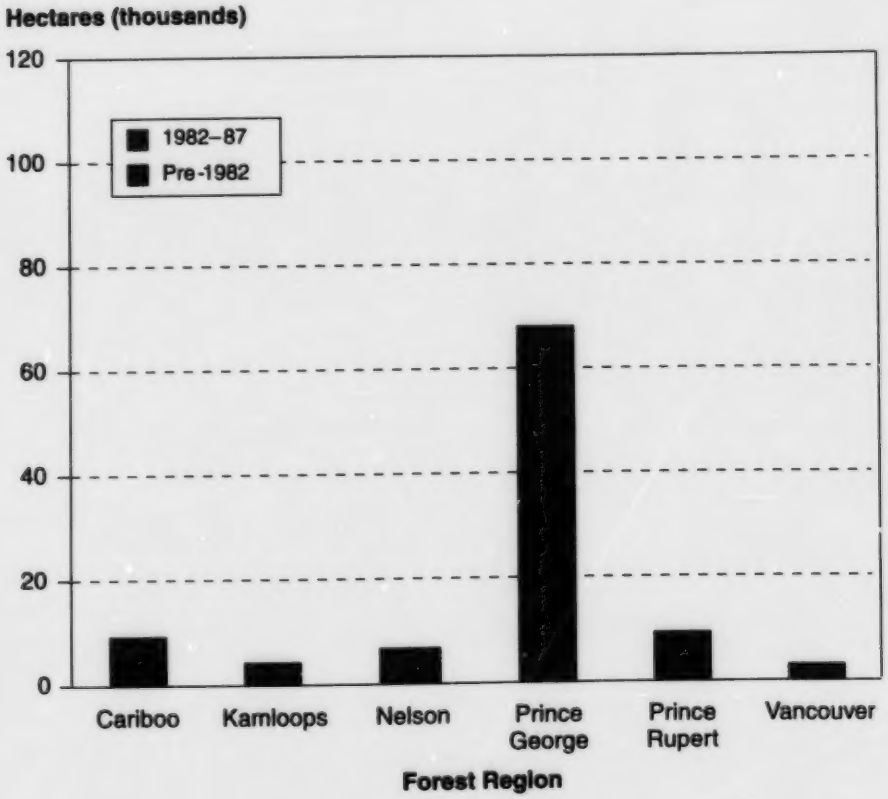
Backlog Area* Brushed Under Various Funding Arrangements



* Includes both backlog NSR and impeded areas.

Net Backlog NSR by Forest Region

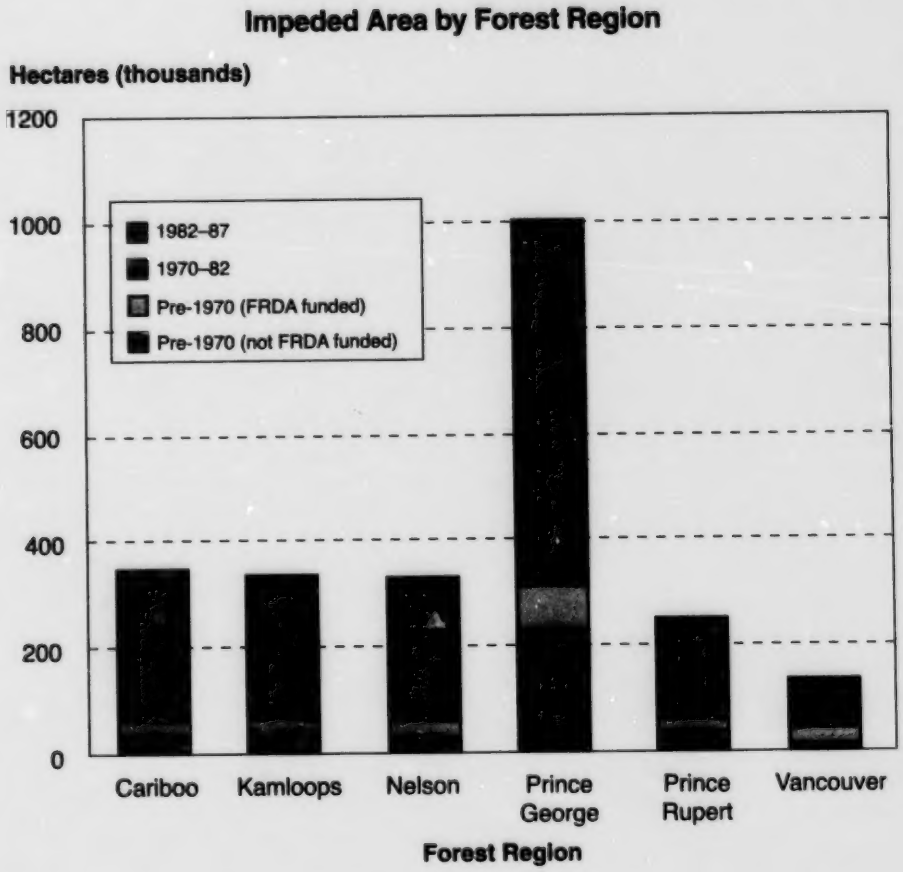
Net Backlog[a] Not Satisfactorily Restocked Land[b] by Forest Region



a Backlog – areas denuded prior to 1982 (pre-1982), good and medium sites only, and from January 1, 1982 to October 1, 1987 (1982–87) good, medium and poor sites only

b NSR – Not satisfactorily restocked
Summary for Crown land only and includes timber supply areas and tree farm licences
Data derived from the Ministry of Forests' hand compiled TFL summaries and ISIS

Impeded Area by Forest Region



Review of the Regional Net Backlog NSR and Impeded Land

Cariboo

The Ministry of Forests 1984 *Forest and Range Resource Analysis* estimated that the Cariboo Forest Region had 43 400 hectares of good and medium site land classified as backlog NSR.

The 2001 summary estimates 3660 hectares of pre-1982 good and medium site backlog NSR remain in the Cariboo Forest Region. This is a decrease of 39 740 hectares or 92% from the 1984 figure.

Backlog NSR on good, medium and poor sites from disturbances that occurred between January 1, 1982 and October 1, 1987 amounts to 4545 hectares in the Cariboo Forest Region. This is a reduction of 63% since 1997.

Planting and reclassification of land following silviculture surveys both contributed to the decrease in backlog NSR. Between 1996 and 2000, approximately 229 000 hectares were surveyed in the Cariboo Forest Region.

As of 2001, there are 341 990 hectares of impeded area that have either not reached or been declared free growing.

Kamloops

In 1984, the Kamloops Forest Region had an estimated 51 400 hectares of good and medium site classified as backlog NSR. The number of silviculture surveys on Crown land was increased through funding under FRDA, identifying additional areas that were NSR. Consequently, the 1988 estimate increased to 74 200 hectares.

The latest estimate (2001) of pre-1982 backlog NSR is 1758 hectares, a decrease of 97% from the 1984 estimate.

Net good, medium and poor site 1982–87 backlog NSR is currently 2175 hectares, which is a reduction of 57% since 1997. Reductions in backlog NSR in the Kamloops Forest Region can be attributed to reforestation activities such as planting and silviculture surveys. From 1996 to 2000, approximately 296 000 hectares have been surveyed.

As of 2001, there are 332 136 hectares of impeded area that have either not reached or been declared free growing.

Nelson

Planting and reclassification of stocking status following surveys funded by FRDA and recently by FRBC, has reduced pre-1982 backlog NSR from 93 700 hectares in 1984, to 3753 hectares in 2001. Net good, medium and poor site backlog from disturbances originating between 1982 and 1987 currently amounts to 1988 hectares. It has been reduced by 61% since 1997.

Some reduction in backlog NSR in the Nelson Forest Region has occurred as a result of reclassification. From 1996 to 2000, silviculture surveys have taken place on approximately 160 000 hectares in the Nelson Region.

As of 2001, there are 324 695 hectares of impeded area that have not reached or been declared free growing.

Prince George

The 1984 *Forest and Range Resource Analysis* estimated that the Prince George Forest Region had 488 700 hectares of good and medium site NSR that had originated prior to 1982. By 1988, the estimate was reduced to 271 700 hectares, and by 1990, to 224 200 hectares. The 2001 estimate of pre-1982 NSR is 39 233 hectares, which is a reduction of 92% since 1984. The reductions in NSR can be attributed to a substantially increased reforestation program as well as a large survey program which determined that many areas were satisfactorily restocked through natural regeneration. Table 1 also indicates that the Prince George Forest Region has 28 057 hectares of 1982–87 good, medium and poor site backlog NSR. Backlog area reported for the Prince George Region has increased since the 1999 report. This increase is attributable to a reporting problem identified with the query used for the 1999 report. Areas originating from natural disturbances and lacking a license number reference were not all being tallied. This resulted in an underestimate of the backlog NSR and particularly impacted the Prince George Region because of the large portion of backlog areas of natural disturbance origin.

From 1996 to 2000, approximately 303 000 hectares of land received silviculture surveys in the Prince George Forest Region. Recent changes in market demands for aspen are also having a significant effect on the estimate of NSR in the region. Until the late 1980s, aspen was not considered an acceptable tree species for reforesting certain ecosystems. Surveys are being

carried out on areas stocked with aspen and conifers that were previously classified as NSR. Many of these ecosystems are now being reclassified as satisfactorily restocked with aspen–conifer mixtures.

Much of the gross NSR in the Prince George Forest Region originated through wildfires in the remote Mackenzie, Fort Nelson, Fort St. John and Dawson Creek Timber Supply Areas. Many of these areas are considered inoperable or inaccessible and have been removed from the net backlog NSR total. However, even with these deductions, a significant portion of the net backlog NSR remaining in the Prince George Forest Region originated through wildfires and other causes, and not through harvesting.

Many of the remaining net backlog areas are not immediately treatable due to constraints imposed by other forest resource users. In many areas, reforestation must be delayed to maintain wildlife habitat on logged or burned openings. Also, it may not be appropriate to treat large areas of backlog at a single time because significant changes in vegetation type would occur. Treatments may be delayed to allow "green-up" of adjacent areas. Natural regeneration continues on many areas and surveying provides current information on the status of NSR sites.

As of 2001, there are 996 246 hectares of impeded area that have not reached or been declared free growing.

Prince Rupert

The Ministry of Forests 1984 *Forest and Range Resource Analysis* estimated that the Prince Rupert Forest Region had 40 500 hectares of good and medium site land classified as backlog NSR land. The 1985 FRDA provided funding for increased reforestation activities on these NSR areas. Funding continues today under FRBC.

In 1988, the estimate of pre-1982 good and medium site backlog NSR rose to 106 400 hectares as a result of increased silviculture surveys. Much of the increase in NSR was due to the reclassification of portions of the Cassiar TSA from poor site to good and medium site.

The 1990 summary indicated that 78 100 hectares of pre-1982 good and medium site backlog NSR remained. At present, it is estimated that 5413 hectares of pre-1982 good and medium site NSR remain. This is an 87% reduction from the original 1984 estimate, and a 95% reduction from the 1988 estimate. Much of this net backlog NSR originated from wildfires and other natural causes.

This report indicates that there are 3156 hectares of 1982–87 good, medium and poor site backlog NSR remaining in the Prince Rupert Forest Region, which is a 67% decrease since 1997.

From 1996 to 2000, silviculture surveys took place on approximately 171 000 hectares of land in the Prince Rupert Forest Region.

As of 2001, there are 245 460 hectares of impeded area that have not reached or been declared free growing.

Vancouver

In 1984, the Vancouver Forest Region had an estimated 20 300 hectares of good and medium site classified as backlog NSR. This 2001 summary indicates that 1605 hectares of pre-1982 NSR remain, which represents a reduction of 92% from the original 1984 estimate.The prediction made in the 1990 NSR summary report that the Vancouver Forest Region would be the first region with little or no backlog NSR has been proven out. NSR resulting from the term 1982–87 is currently 628 hectares, which is a 79% reduction since 1997.

The reduction in backlog NSR can be attributed to increased reforestation activities. Increased planting on backlog NSR areas and silviculture surveys have resulted in less area being classified as NSR. Between 1996 and 2000, approximately 182 000 hectares were surveyed in the Vancouver Forest Region.

As of 2001, there are 129 862 hectares of impeded area that have not reached or been declared free growing.

Review of the Regional Net Backlog NSR and Impeded Land

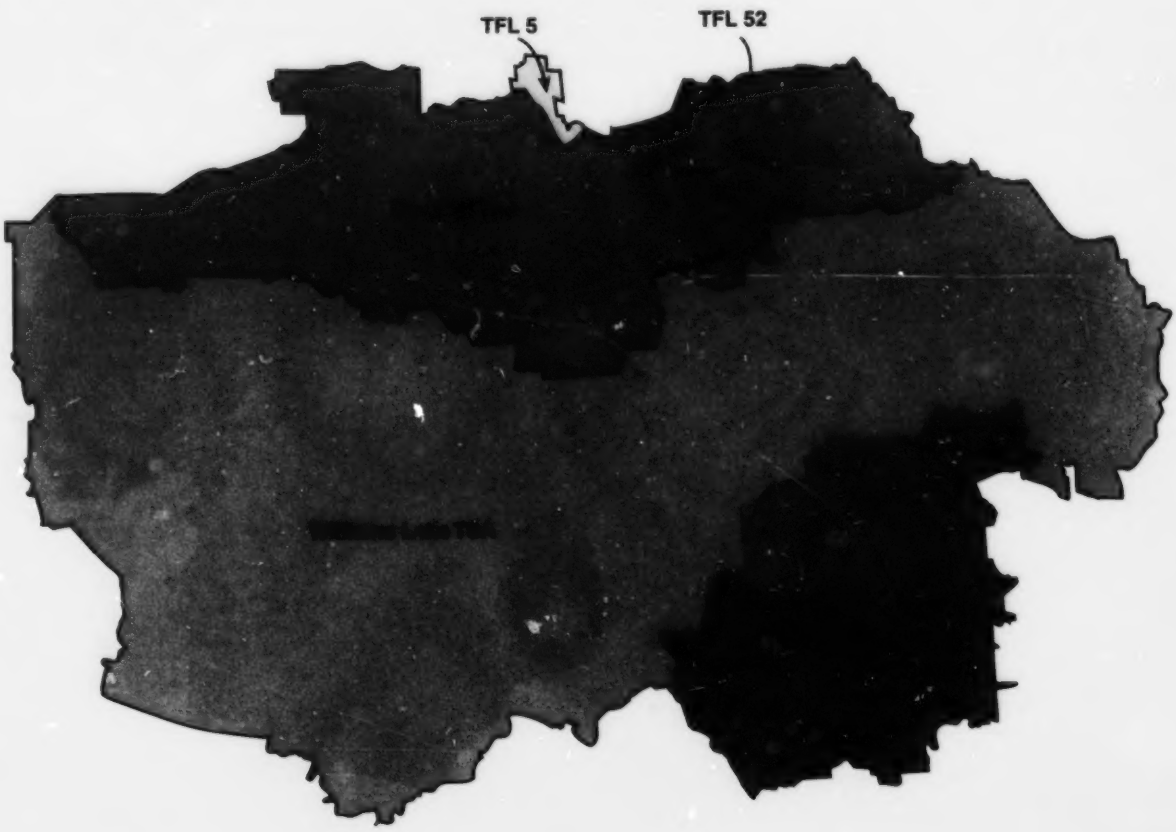
Summary

This report shows that considerable progress has been made at reducing backlog on treatable sites, but that the rate of reduction has slowed in the past two years. As the FRDA agreement wound down in 1990, the Ministry of Forests continued to address backlog areas at a slightly reduced rate. FRBC continues to fund reforestation and survey work, but at a lesser rate.

If current rates of surveying and planting continue, backlog NSR is likely to be eliminated in the Cariboo, Kamloops, Nelson Forest Regions by 2005–2006, and sooner in the Vancouver Region. However, it is likely to take until at least 2007 for it to be eliminated in the Prince Rupert and Prince George Forest Regions. Concurrent with the elimination of backlog NSR is the need for an ongoing long-term commitment to fund the silviculture treatments (i.e., brushing and surveys) which will ensure that these areas develop into healthy, free growing stands. Funding for these activities will be required for approximately 15 years after all backlog NSR areas are rehabilitated, planted or naturally regenerated.

Estimates of impeded area are expected to decrease for all Forest Regions as more surveys are conducted, more areas are brushed, and existing information on files is reviewed and the ISIS database is updated.

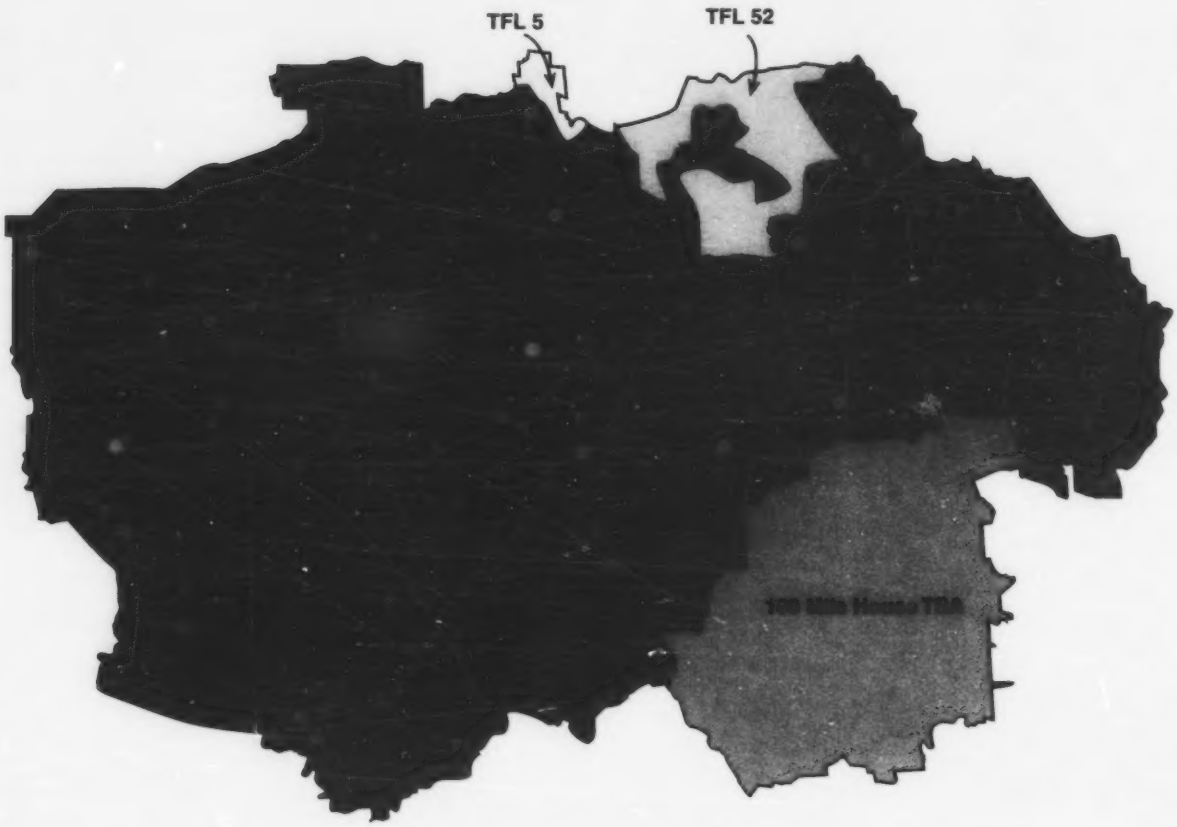
Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land



Good and Medium Site Net Backlog NSR

- 0 ha
- <100 ha
- 100–500 ha
- 500–1000 ha
- 1000–1500 ha
- 1500–2000 ha

Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land

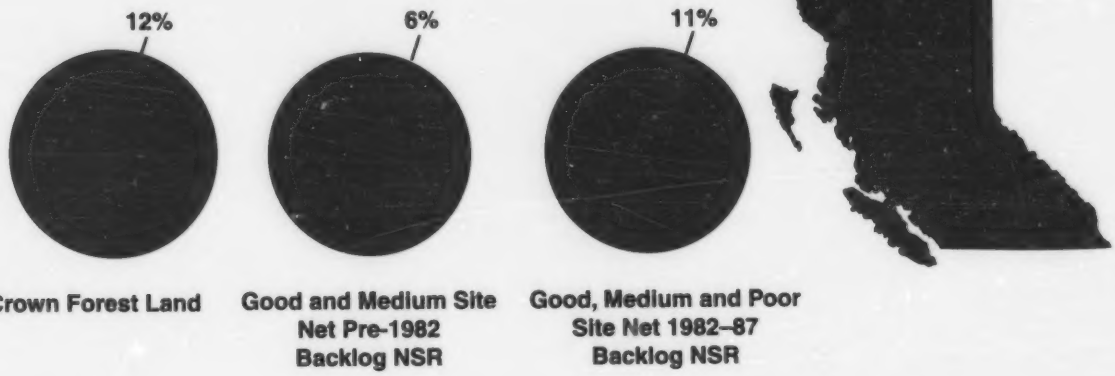


Good, Medium and Poor Site Net Backlog NSR

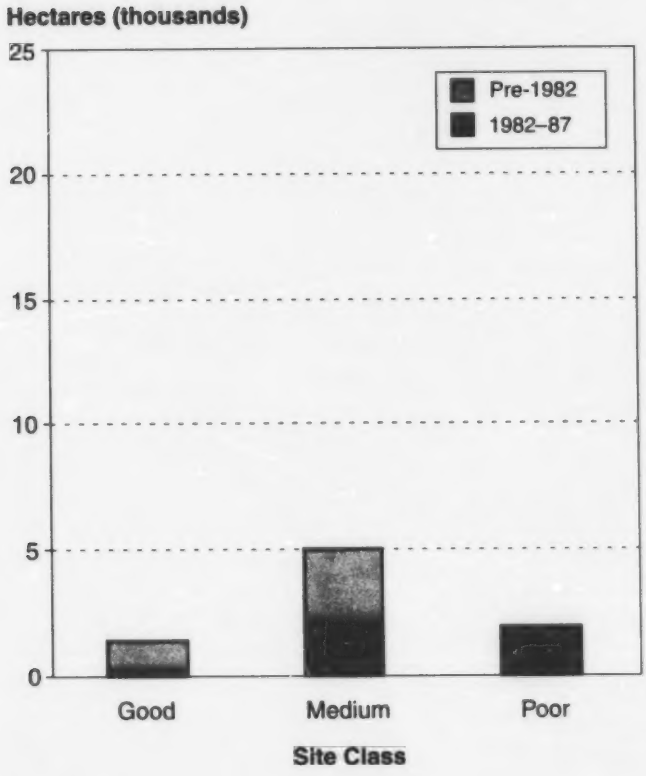
- 0 ha
- <100 ha
- 100–500 ha
- 500–1000 ha
- 1000–1500 ha
- 1500–2000 ha
- 2000–2500 ha

Cariboo Forest Region

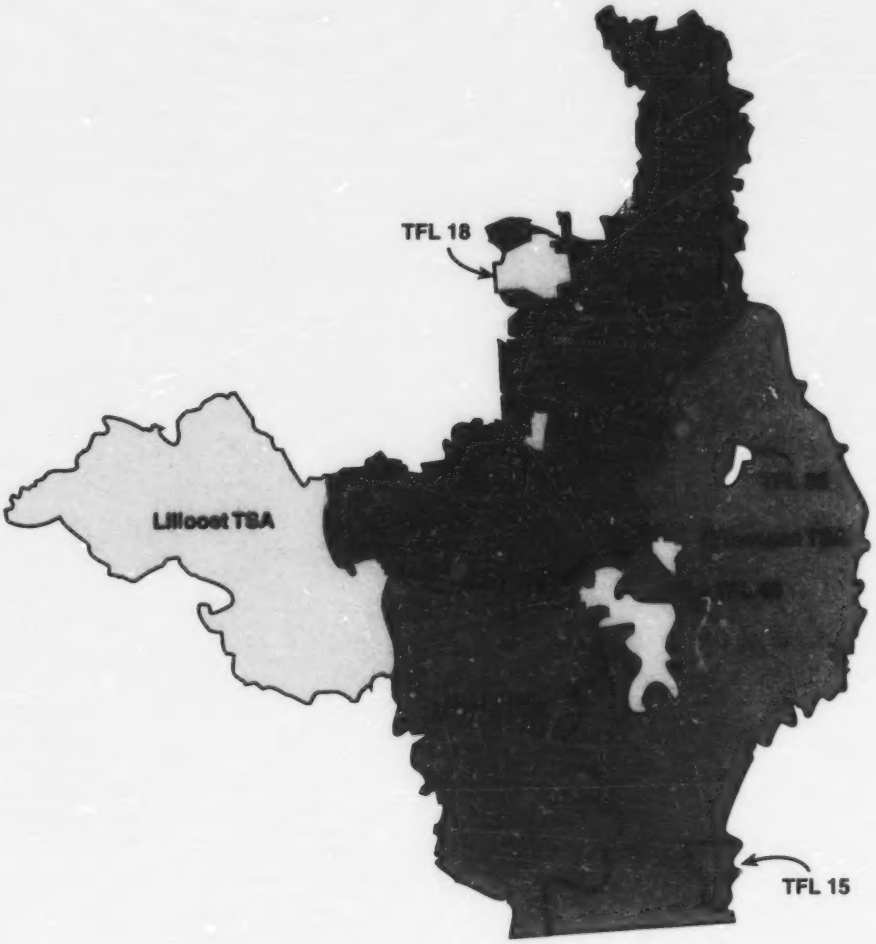
Proportions of Provincial Totals in Cariboo Forest Region



Net Backlog NSR by Site Class



Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land



Good and Medium Site Net Backlog NSR

- 0 ha
- <100 ha
- 100–500 ha
- 500–1000 ha

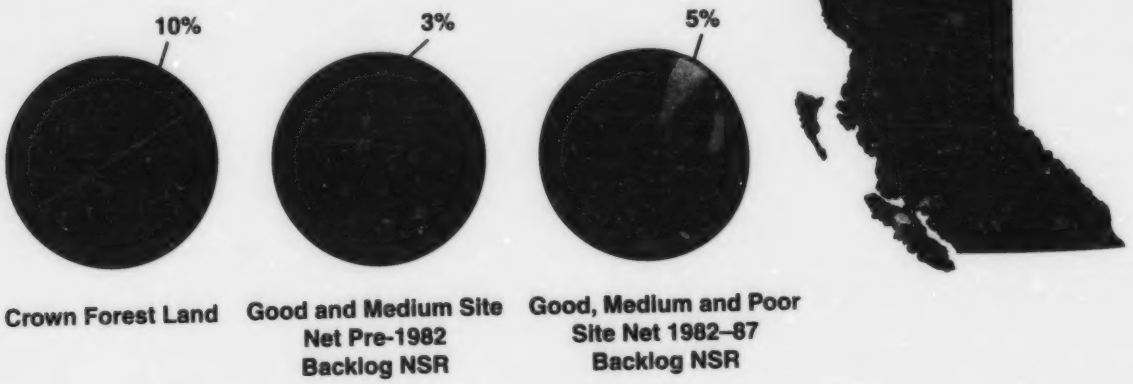
Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land

Good, Medium and Poor Site Net Backlog NSR

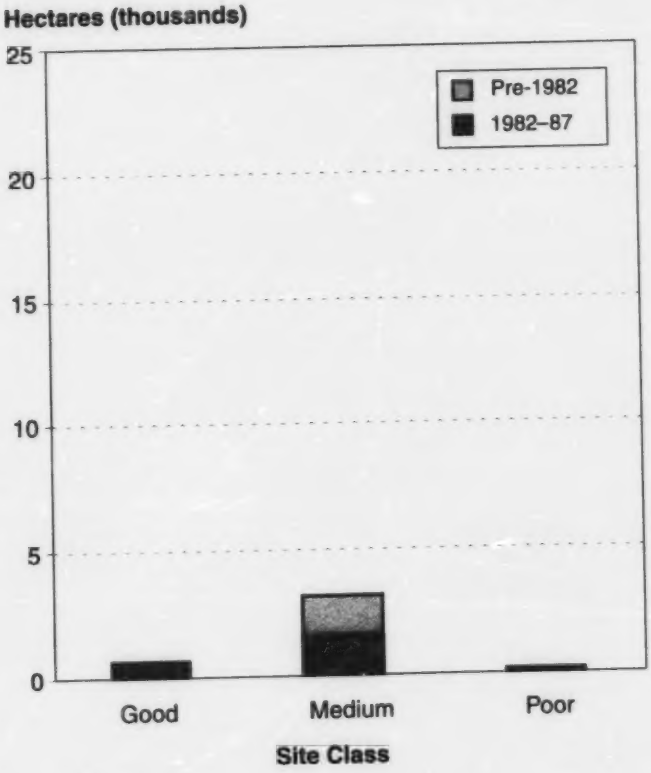
- 0 ha
- <100 ha
- 100–500 ha
- 500–1000 ha
- 1000–1500 ha

Kamloops Forest Region

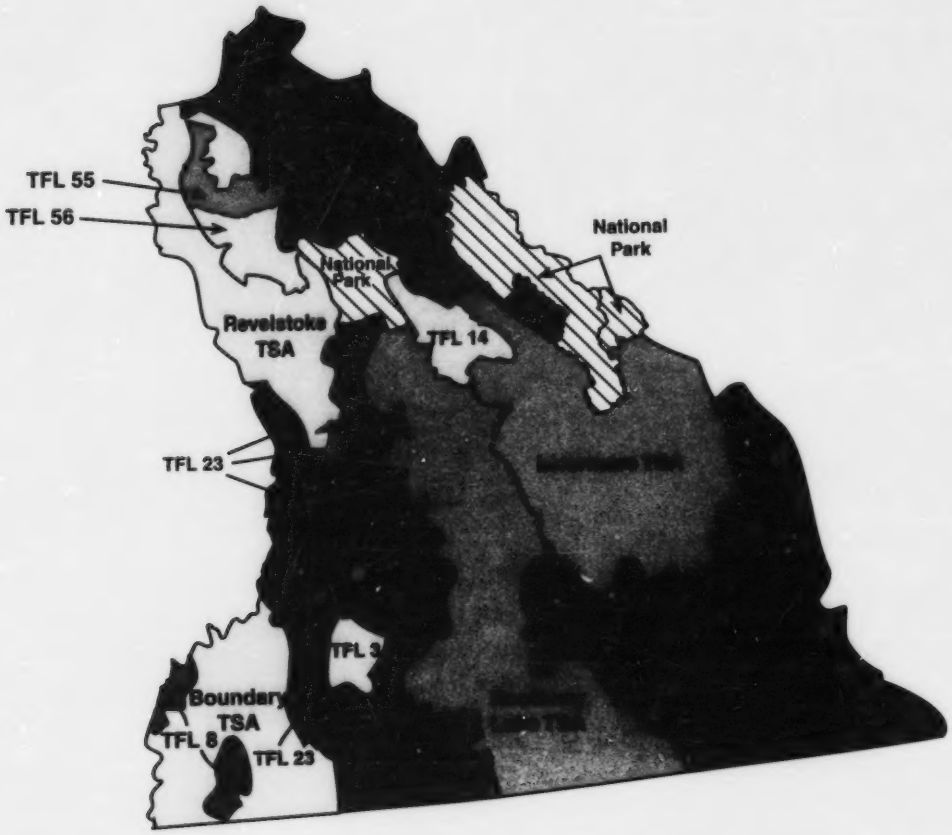
Proportions of Provincial Totals in Kamloops Forest Region



Net Backlog NSR by Site Class



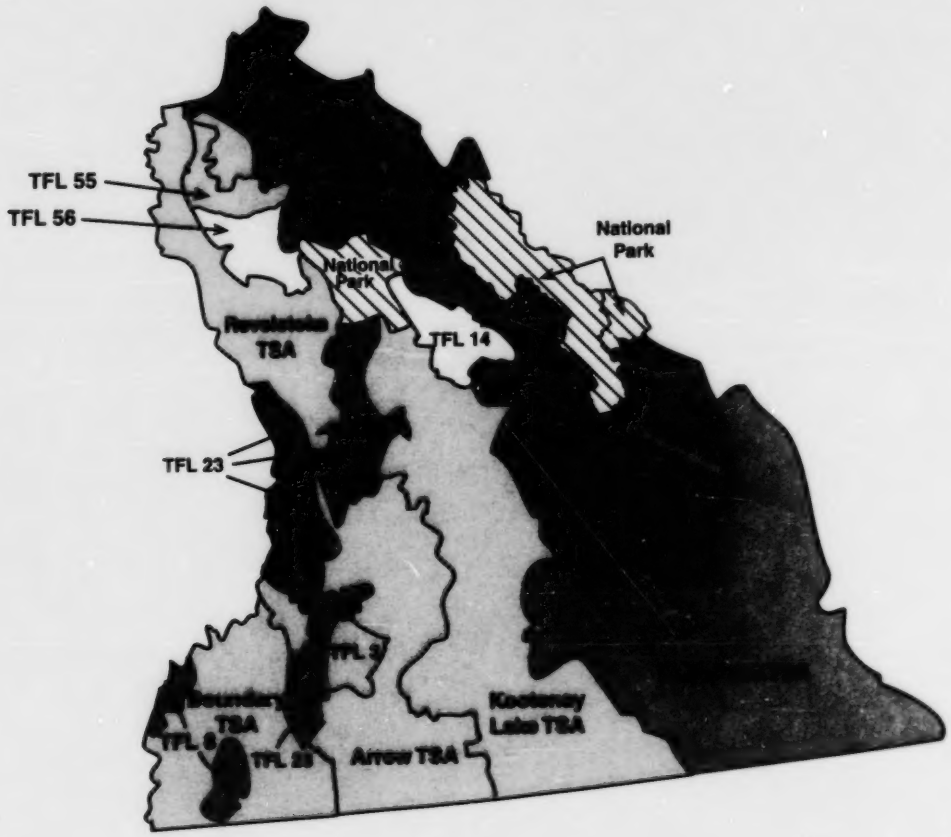
Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land



Good and Medium Site Net Backlog NSR

- 0 ha
- <100 ha
- 100–200 ha
- 200–400 ha
- 400–600 ha
- 600–800 ha
- 800–1000

Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land

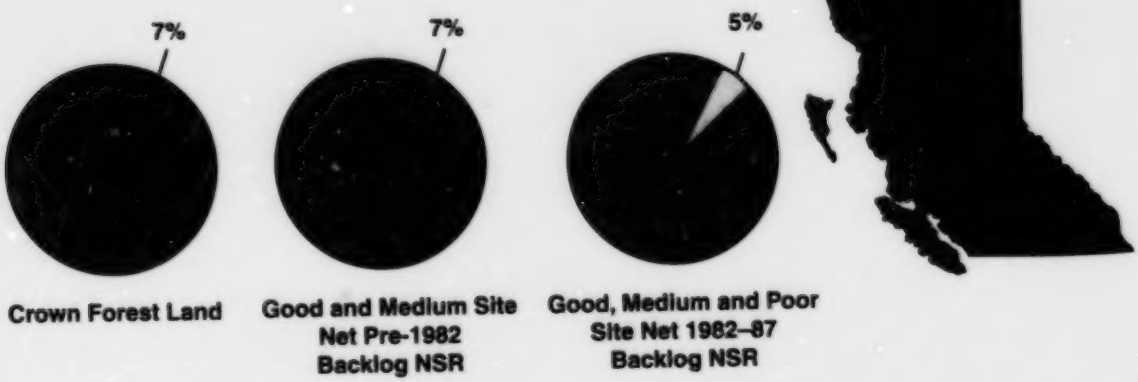


Good, Medium and Poor Site Net Backlog NSR

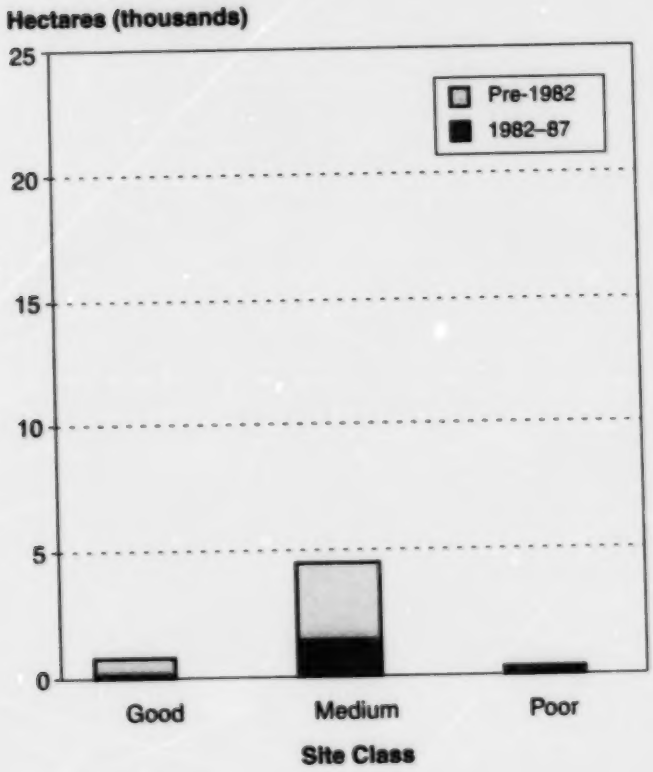
- 0 ha
- <100 ha
- 100–200 ha
- 200–400 ha
- 400–600 ha
- 600–800 ha

Nelson Forest Region

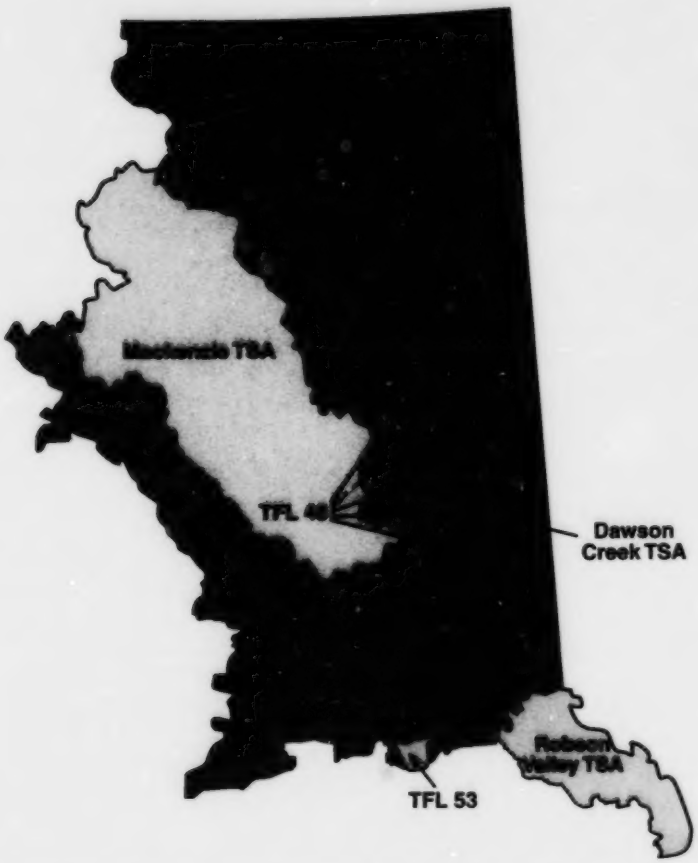
Proportions of Provincial Totals in Nelson Forest Region



Net Backlog NSR by Site Class



Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land



Good and Medium Site Net Backlog NSR

- 0 ha
- <100 ha
- 100–1000 ha
- 1000–3000 ha
- 3000–5000 ha
- 5000–10 000 ha
- 10 000–15 000 ha

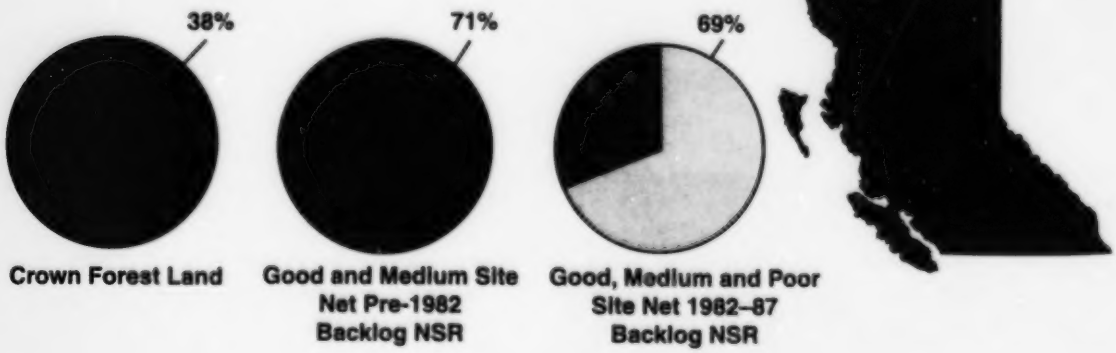
Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land

Good, Medium and Poor Site Net Backlog NSR

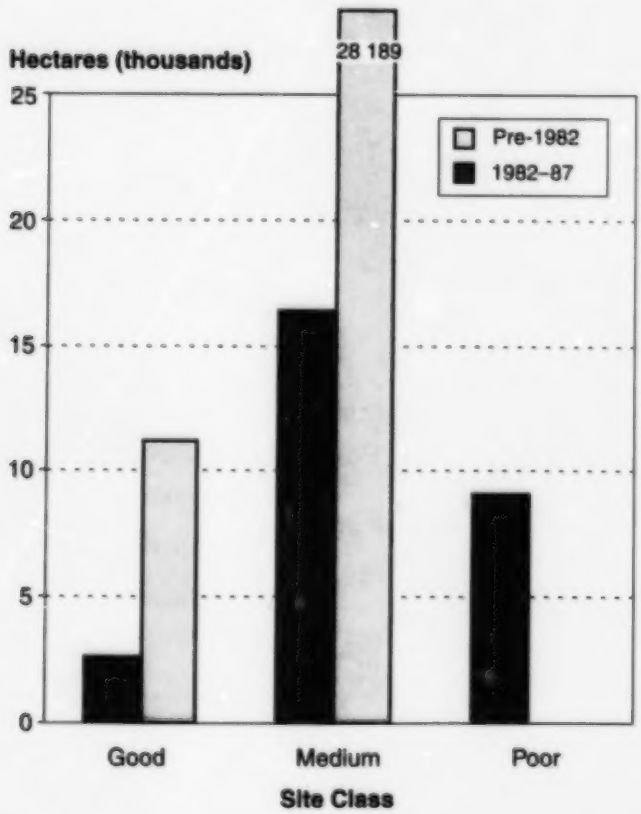
- 0 ha
- <100 ha
- 100–1000 ha
- 1000–2500 ha
- 2500–5000 ha
- 5000–7500 ha
- 7500–10 000 ha

Prince George Forest Region

Proportions of Provincial Totals in Prince George Forest Region

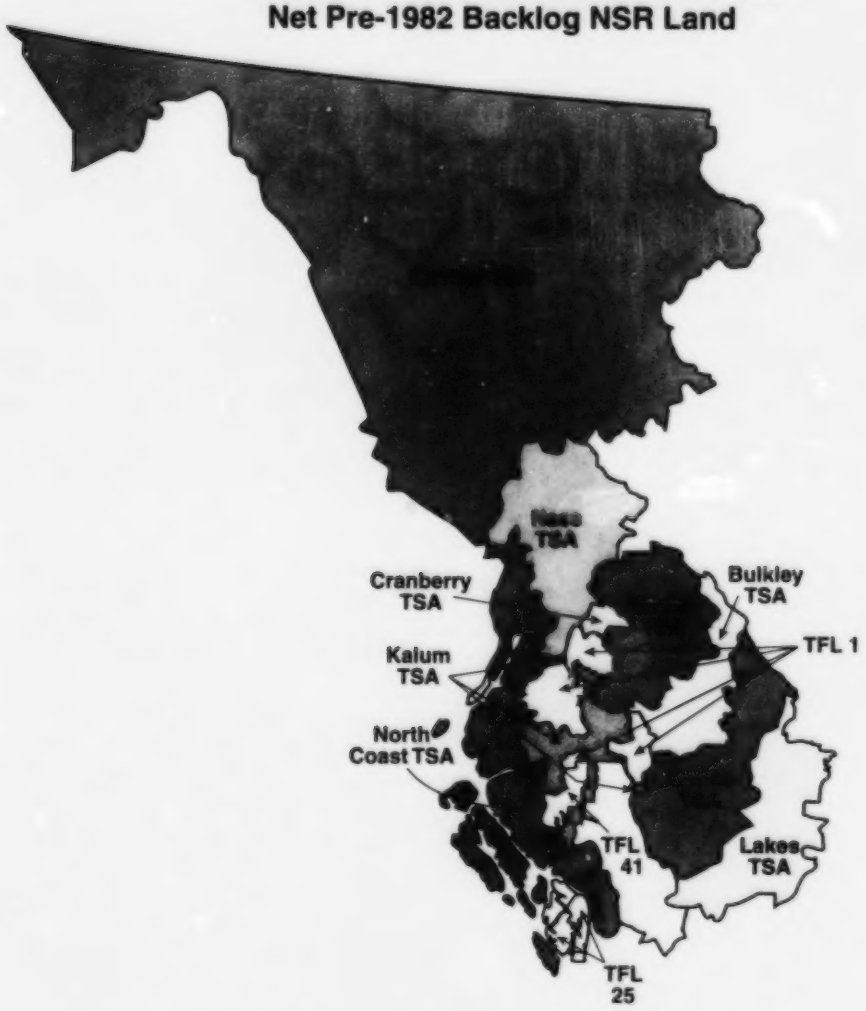


Net Backlog NSR by Site Class

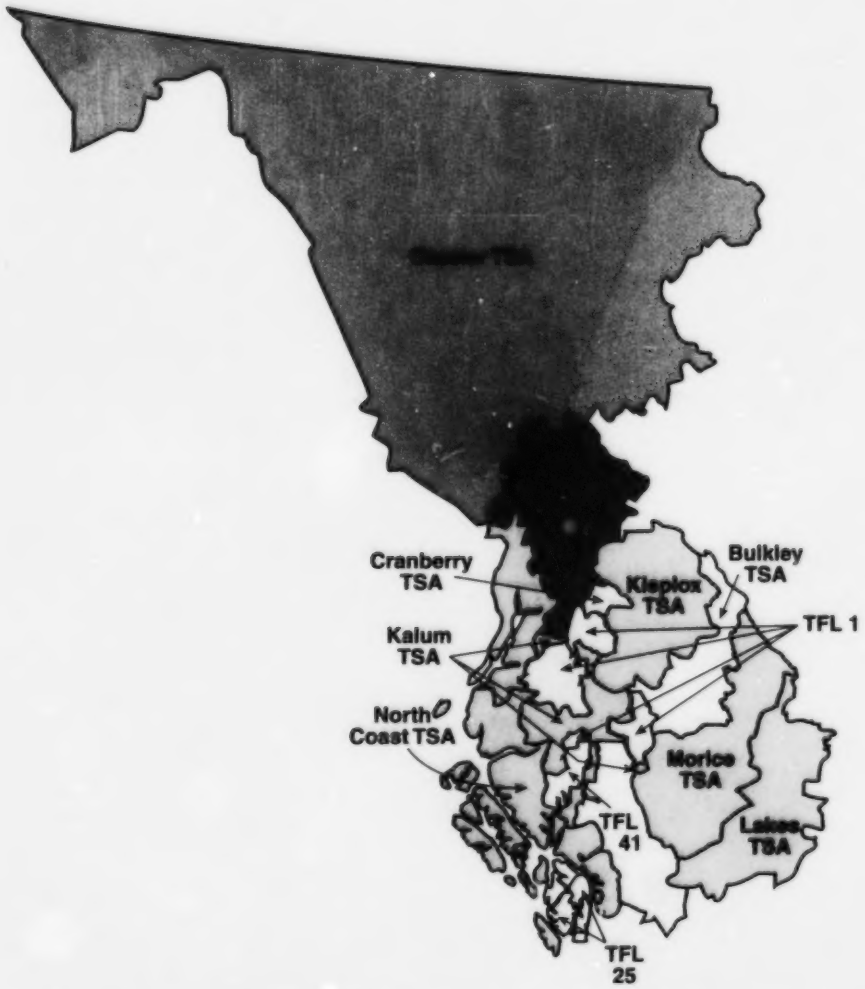


Prince Rupert Forest Region

Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land



Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land

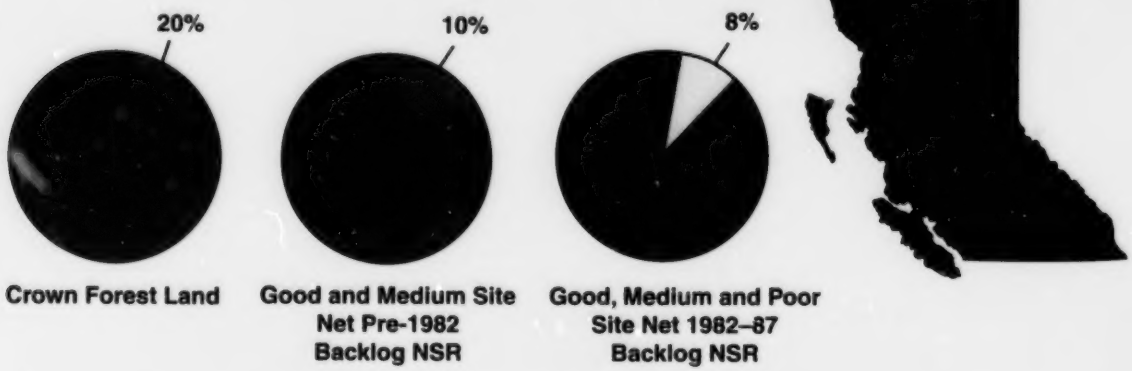


Good, Medium and Poor Site Net Backlog NSR

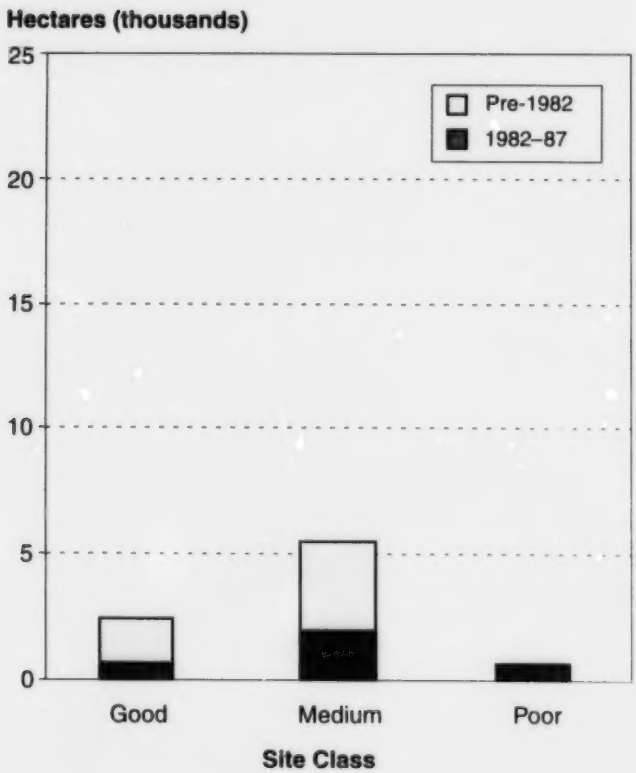
- 0 ha
- <100 ha
- 100–500 ha
- 500–1000 ha
- 1000–1500 ha

Prince Rupert Forest Region

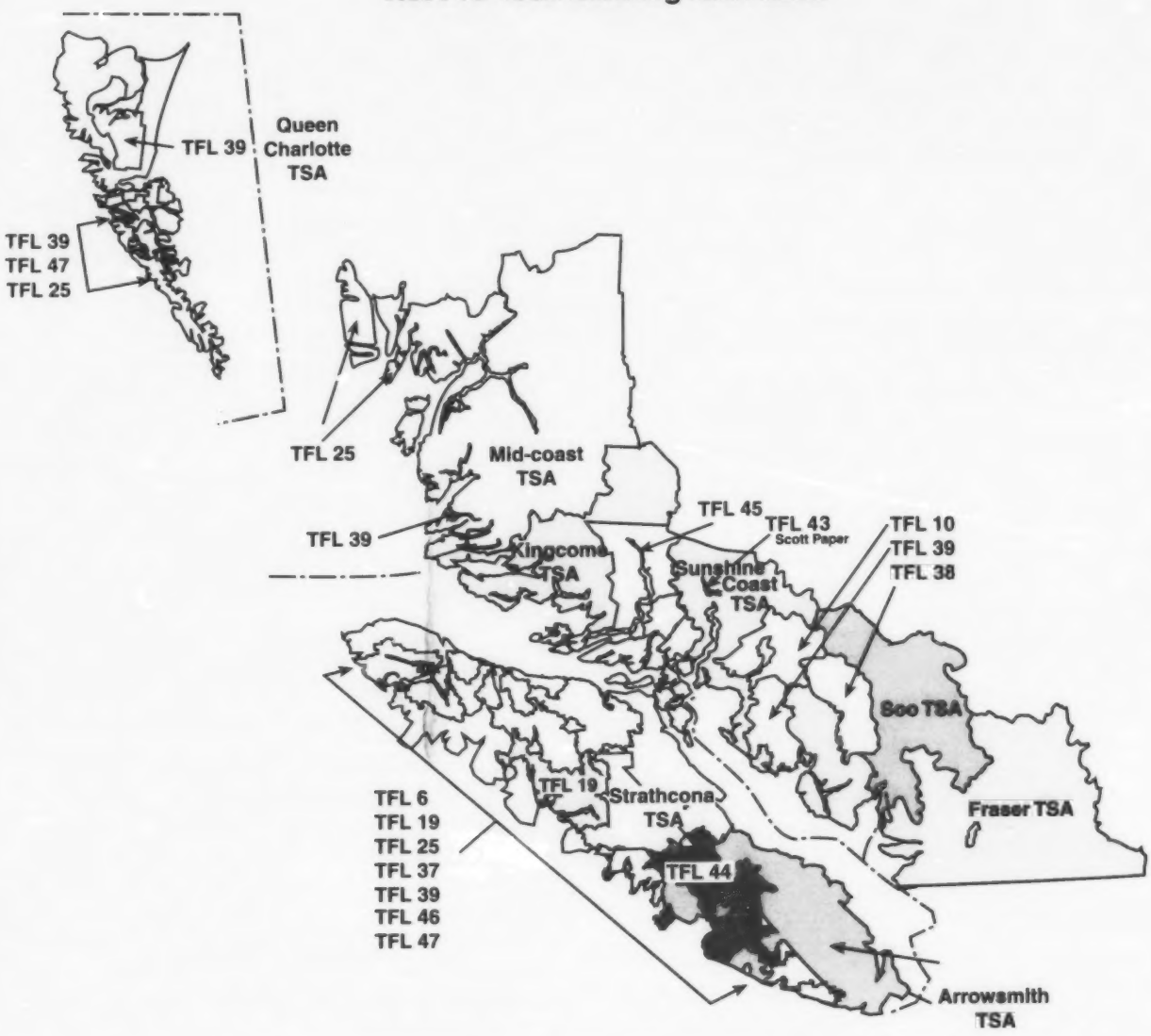
Proportions of Provincial Totals in Prince Rupert Forest Region



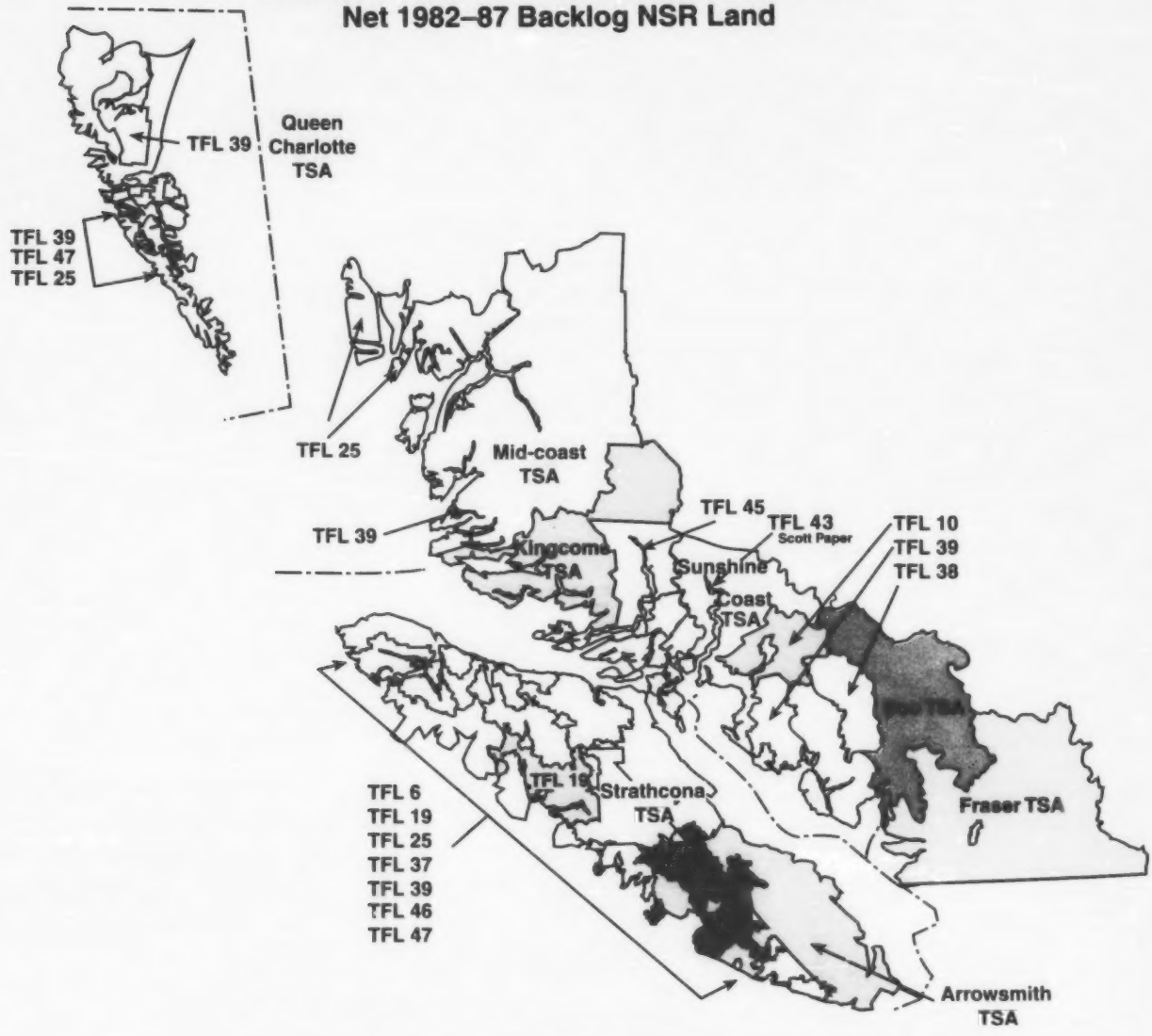
Net Backlog NSR by Site Class



Location of the Good and Medium Site Net Pre-1982 Backlog NSR Land



Location of the Good, Medium and Poor Site Net 1982–87 Backlog NSR Land

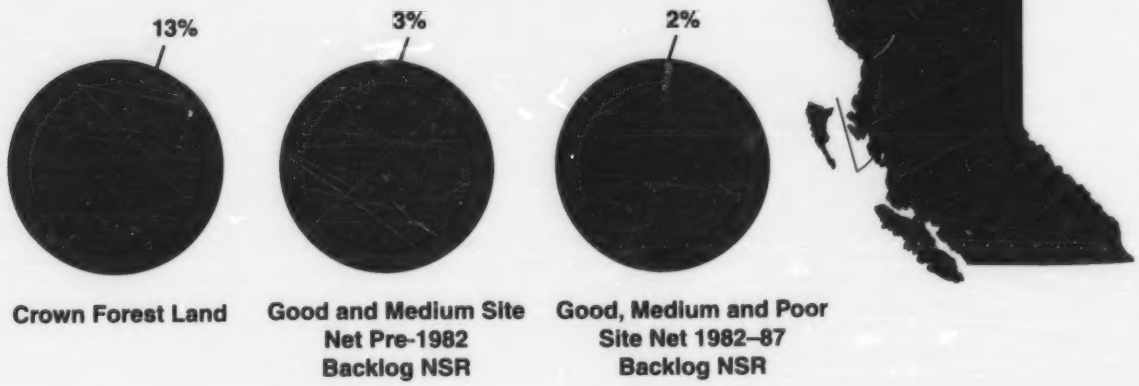


Good, Medium and Poor Site Net Backlog NSR

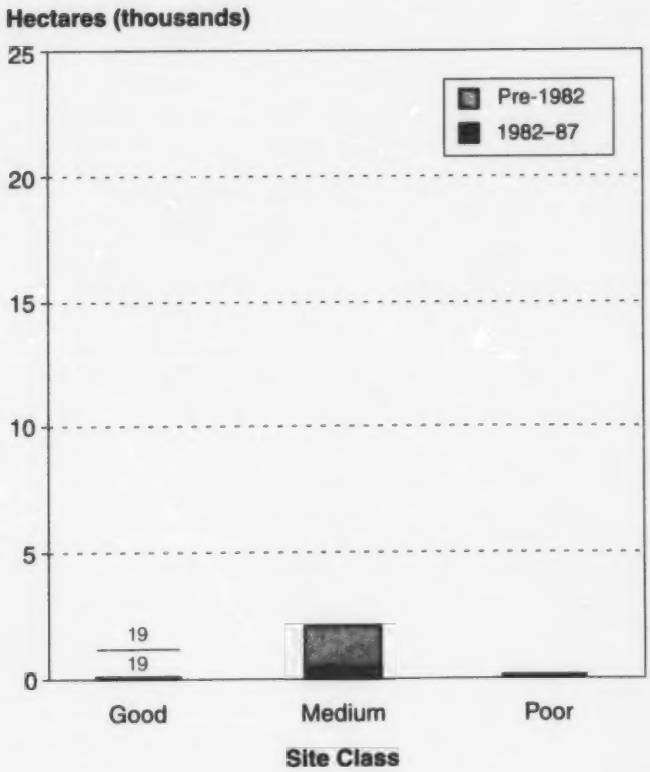
- 0 ha
- <100 ha
- 100–200 ha
- 200–300 ha
- 300–400 ha
- 400–500 ha

Vancouver Forest Region

Proportions of Provincial Totals in Vancouver Forest Region



Net Backlog NSR by Site Class



Appendix 1 Summary of Regional Proportions

Summary Table of Provincial/Regional Proportions

Region	Percent of provincial Crown land		
		Net backlog NSR	
	Productive forest land	Pre-1982 (good + med.)	1982–87 (good, med. + poor)
Cariboo	12	6	11
Kamloops	10	3	5
Nelson	7	7	5
Prince George	38	71	69
Prince Rupert	20	10	8
Vancouver	13	3	2
Provincial totals	**100**	**100**	**100**

Appendix 2 Summary of Net Backlog[a] NSR by Region, TSA and TFL

Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR Site by Class

Region	Site class				
	Good	Medium	Poor	Low	Total
	(area in hectares)				
Cariboo	947	2 675	595	0	4 217
Kamloops	165	1 602	140	0	1 907
Nelson	657	3 097	790	406	4 950
Prince George	11 067	28 189	11 049	3 471	53 776
Prince Rupert	1 812	3 610	7 365	0	12 787
Vancouver	19	1 587	268	26	1 900
Provincial totals	14 667	40 760	20 207	3 903	79 537
Total good and medium (net)	**55 427 hectares**				

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3.

Appendix 2 Continued

Backlog Not Satisfactorily Restocked Land[a]

1982–87 NSR by Site Class

Region	Site class				
	Good	Medium	Poor	Low	Total
	(area in hectares)				
Cariboo	385	2 281	1 874	18	4 558
Kamloops	415	1 618	132	0	2 165
Nelson	220	1 462	324	11	2 017
Prince George	2 597	16 341	9 089	62	28 089
Prince Rupert	614	1 927	633	91	3 265
Vancouver	19	561	48	25	653
Provincial totals	4 250	24 190	12 100	207	40 747

Total good, medium and poor (net) 40 540 hectares

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3.

Appendix 2 Continued

Regional Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Region	Management unit	Site class				
		Good	Medium	Poor	Low	Total
		(area in hectares)				
Cariboo	TSA	907	1 546	595	0	3 048
	TFL	40	1 129	0	0	1 169
	Total	**947**	**2 675**	**595**	**0**	**4 217**
Kamloops	TSA	151	1 388	140	0	1 679
	TFL	14	214	0	0	228
	Total	**165**	**1 602**	**140**	**0**	**1 907**
Nelson	TSA	473	2 463	540	23	3 499
	TFL	184	634	250	383	1 451
	Total	**657**	**3 097**	**790**	**406**	**4 950**
Prince George	TSA	7 950	22 628	10 789	3 471	44 838
	TFL	3 117	5 561	260	0	8 938
	Total	**11 067**	**28 189**	**11 049**	**3 471**	**53 776**
Prince Rupert	TSA	1 812	3 565	7 365	0	12 742
	TFL	0	45	0	0	45
	Total	**1 812**	**3 610**	**7 365**	**0**	**12 787**
Vancouver	TSA	9	436	252	26	723
	TFL	10	1 151	16	0	1 177
	Total	**19**	**1 587**	**268**	**26**	**1 900**
Province	TSA	11 302	32 026	19 681	3 520	66 529
	TFL	3 365	8 734	526	383	13 008
	Total	**14 667**	**40 760**	**20 207**	**3 903**	**79 537**

Total good and medium (net) **55 427 hectares**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3.

Appendix 2 Continued

Regional Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–87 NSR by Site Class

Region	Management unit	Site class				
		Good	Medium	Poor	Low	Total
		(area in hectares)				
Cariboo	TSA	375	2 121	1 874	18	4 388
	TFL	10	160	0	0	170
	Total	**385**	**2 281**	**1 874**	**18**	**4 558**
Kamloops	TSA	415	1 578	132	0	2 125
	TFL	0	40	0	0	40
	Total	**415**	**1 618**	**132**	**0**	**2 165**
Nelson	TSA	83	1 055	303	11	1 452
	TFL	137	407	21	0	565
	Total	**220**	**1 462**	**324**	**11**	**2 017**
Prince George	TSA	2 442	15 569	9 042	62	27 115
	TFL	155	772	47	0	974
	Total	**2 597**	**16 341**	**9 089**	**62**	**28 089**
Prince Rupert	TSA	614	1 884	628	91	3 217
	TFL	0	43	5	0	48
	Total	**614**	**1 927**	**633**	**91**	**3 265**
Vancouver	TSA	19	216	48	25	308
	TFL	0	345	0	0	345
	Total	**19**	**561**	**48**	**25**	**653**
Province	TSA	3 948	22 243	12 027	207	38 605
	TFL	302	1 767	73	0	2 142
	Total	**4 250**	**24 190**	**12 100**	**207**	**40 747**

Total good, medium and poor (net) **40 540[b] hectares**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3.

[b] Numbers may vary slightly from table to table due to rounding.

Appendix 2 Continued

Cariboo Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	23	100 Mile House	75	464	397	0	936
	26	Quesnel	800	930	21	0	1 751
	29	Williams Lake	32	152	177	0	361
Total TSA			907	1 546	595	0	3 048
TFL	5	Mackenzie–Cariboo (Quesnel)	40	4	0	0	44
	52	Bowron–Cottonwood	0	1125	0	0	1125
Total TFL			40	1 129	0	0	1 169
Total region			**947**	**2 675**	**595**	**0**	**4 217**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Cariboo Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–87 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	23	100 Mile House	13	639	217	18	887
	26	Quesnel	263	991	71	0	1 325
	29	Williams Lake	99	491	1 586	0	2 176
Total TSA			375	2 121	1 874	18	4 388
TFL	5	Mackenzie–Cariboo (Quesnel)	10	0	0	0	10
	52	Bowron–Cottonwood	0	160	0	0	160
Total TFL			10	160	0	0	170
Total region			**385**	**2 281**	**1 874**	**18**	**4 558**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Kamloops Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	11	Kamloops	88	882	66	0	1 036
	15	Lillooet	0	88	0	0	88
	18	Merritt	63	91	9	0	163
	22	Okanagan	0	327	65	0	392
Total TSA			151	1 388	140	0	1 679
TFL	15	Inkaneep (Okanagan Falls)	0	151	0	0	151
	18	Clearwater	0	53	0	0	53
	33	Sicamous	0	0	0	0	0
	35	Jamieson Creek	14	9	0	0	23
	49	Okanagan	0	1	0	0	1
Total TFL			14	214	0	0	228
Total region			**165**	**1 602**	**140**	**0**	**1 907**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Kamloops Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–1987 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	11	Kamloops	338	886	91	0	1 315
	15	Lillooet	0	0	10	0	10
	18	Merritt	77	184	23	0	284
	22	Okanagan	0	508	18	0	526
Total TSA			415	1 578	132	0	2 125
TFL	15	Inkaneep (Okanagan Falls)	0	31	0	0	31
	18	Clearwater	0	9	0	0	9
	33	Sicamous	0	0	0	0	0
	35	Jamieson Creek	0	0	0	0	0
	49	Okanagan (Kelowna)	0	0	0	0	0
Total TFL			0	40	0	0	40
Total region			**415**	**1 618**	**132**	**0**	**2 165**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Nelson Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Management unit type, number and location		Site class				
		Good	Medium	Poor	Low	Total
		(area in hectares)				
TSA	1 Arrow	76	199	108	0	383
	2 Boundary	0	8	0	0	8
	5 Cranbrook	44	781	17	23	865
	7 Golden[b]	310	609	393	0	1 312
	9 Invermere	0	173	0	0	173
	13 Kootenay Lake	19	654	22	0	695
	27 Revelstoke	24	39	0	0	63
Total TSA		473	2 463	540	23	3 499
TFL	3 Little Slocan (Arrow)	0	34	0	0	34
	8 Boundary Creek	17	294	16	0	327
	14 Spillimacheen (Invermere)	0	4	0	0	4
	23 Arrow Lakes (Revelstoke)	102	261	234	383	980
	55 Selkirk	61	41	0	0	102
	56 Goldstream	4	0	0	0	4
Total TFL		184	634	250	383	1 451
Total region		**657**	**3 097**	**790**	**406**	**4 950**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

[b] An estimated 900 hectares of fire-origin pre-1982 backlog NSR in the Golden TSA is expected to be reclassified as SR when the sites can be accessed for surveying.

Appendix 2 Continued

Nelson Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–1987 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	1	Arrow	6	47	37	0	90
	2	Boundary	0	17	0	0	17
	5	Cranbrook	35	556	17	11	619
	7	Golden	22	140	180	0	342
	9	Invermere	11	210	52	0	273
	13	Kootenay Lake	9	60	17	0	86
	27	Revelstoke	0	25	0	0	25
Total TSA			83	1 055	303	11	1 452
TFL	3	Little Slocan (Arrow)	35	0	3	0	38
	8	Boundary Creek	2	126	0	0	128
	14	Spillimacheen (Invermere)	0	0	0	0	0
	23	Arrow Lakes (Revelstoke)	65	276	18	0	359
	55	Selkirk	35	5	0	0	40
	56	Goldstream	0	0	0	0	0
Total TFL			137	407	21	0	565
Total region			**220**	**1 462**	**324**	**11**	**2 017**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Prince George Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	8	Fort Nelson	2 752	1 368	52	103	4 275
	16	Mackenzie	375	5 144	4 948	3 361	13 828
	17	Robson Valley (McBride)	123	472	71	0	666
	24	Prince George	3 493	7 936	2 201	7	13 637
	40	Fort St. John	984	3 275	122	0	4 381
	41	Dawson Creek	223	4 433	3 395	0	8 051
Total TSA			7 950	22 628	10 789	3 471	44 838
TFL	30	Sinclair (N.E. of P. George)	2 463	1 938	260	0	4 661
	42	Tanizul (Fort St. James)	0	1 220	0	0	1 220
	48	Chetwynd	0	2 403	0	0	2 403
	53	Naver	654	0	0	0	654
Total TFL			3 117	5 561	260	0	8 938
Total region			**11 067**	**28 189**	**11 049**	**3 471**	**53 776**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Prince George Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–1987 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	8	Fort Nelson	1 053	3 328	423	62	4 866
	16	Mackenzie	336	1 773	1 746	0	3 855
	17	Robson Valley (McBride)	13	271	55	0	339
	24	Prince George	646	2 232	124	0	3 002
	40	Fort St. John	307	4 962	1 303	0	6 572
	41	Dawson Creek	87	3 003	5 391	0	8 481
Total TSA			2 442	15 569	9 042	62	27 115
TFL	30	Sinclair (N.E. of P. George)	50	287	47	0	384
	42	Tanizul (Fort St. James)	0	218	0	0	218
	48	Chetwynd	0	267	0	0	267
	53	Naver	105	0	0	0	105
Total TFL			155	772	47	0	974
Total region			**2 597**	**16 341**	**9 089**	**62**	**28 089**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Prince Rupert Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Management unit type, number and location		Site class				
		Good	Medium	Poor	Low	Total
		(area in hectares)				
TSA	3 Bulkley	5	36	0	0	41
	4 Cassiar	275	369	1 782	0	2 426
	10 Kalum	970	938	1 123	0	3 031
	12 Kispiox	40	490	1 490	0	2 020
	14 Lakes	8	65	55	0	128
	20 Morice	0	715	0	0	715
	21 North Coast	420	487	206	0	1 113
	42 Cranberry	52	24	0	0	76
	43 Nass	42	441	2 709	0	3 192
Total TSA		1 812	3 565	7 365	0	12 742
TFL	1 Port Edward (Kalum)	0	45	0	0	45
	25 Naka	0	0	0	0	0
	41 Kitimat	0	0	0	0	0
Total TFL		0	45	0	0	45
Total region		**1 812**	**3 610**	**7 365**	**0**	**12 787**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Prince Rupert Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–1987 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	3	Bulkley	0	0	0	0	0
	4	Cassiar	0	258	250	41	549
	10	Kalum	34	74	0	0	108
	12	Kispiox	92	159	43	0	294
	14	Lakes	15	130	10	0	155
	20	Morice	130	113	235	0	478
	21	North Coast	25	148	14	0	187
	42	Cranberry	28	54	0	0	82
	43	Nass	290	948	76	50	1 364
Total TSA			614	1 884	628	91	3 217
TFL	1	Port Edward (Kalum)	0	43	5	0	48
	25	Naka	0	0	0	0	0
	41	Kitimat	0	0	0	0	0
Total TFL			0	43	5	0	48
Total region			**614**	**1 927**	**633**	**91**	**3 265**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Vancouver Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

Pre-1982 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	19	Mid-coast	0	0	0	0	0
	25	Queen Charlotte	0	0	0	0	0
	30	Fraser	0	83	41	26	150
	31	Soo	0	219	55	0	274
	33	Kingcome	9	28	66	0	103
	37	Strathcona	0	0	0	0	0
	38	Arrowsmith	0	100	13	0	113
	39	Sunshine Coast	0	6	77	0	83
Total TSA			9	436	252	26	723
TFL	6	Quatsino (Port McNeill)	0	0	0	0	0
	10	Toba (Toba River)	0	0	0	0	0
	19	Tahsis (Gold River)	10	0	0	0	10
	24	Moresby (Q.C.I.)	0	0	0	0	0
	25	Naka (Port McNeill)	0	0	0	0	0
	26	Corporation of Mission	0	0	0	0	0
	37	Nimkish	0	0	0	0	0
	38	Squamish (Squamish River)	0	0	0	0	0
	39	Haida (Powell River, all divisions)	0	0	0	0	0
	43	Fraser/Hanathko/Kingcome	0	0	0	0	0
	44	Alberni (Port Alberni)	0	1 151	16	0	1 167
	45	Cordera-Knight (all divisions)	0	0	0	0	0
	46	Maquinna (west coast, all divisions)	0	0	0	0	0
	47	Duncan Bay (all divisions)	0	0	0	0	0
Total TFL			10	1 151	16	0	1 177
Total region			**19**	**1 587**	**268**	**26**	**1 900**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Appendix 2 Continued

Vancouver Forest Region – Summary of Backlog Not Satisfactorily Restocked Land[a]

1982–1987 NSR by Site Class

Management unit type, number and location			Site class				
			Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	19	Mid-coast	0	0	0	25	25
	25	Queen Charlotte	0	0	0	0	0
	30	Fraser	0	33	11	0	44
	31	Soo	5	109	0	0	114
	33	Kingcome	14	32	37	0	83
	37	Strathcona	0	0	0	0	0
	38	Arrowsmith	0	42	0	0	42
	39	Sunshine Coast	0	0	0	0	0
Total TSA			19	216	48	25	308
TFL	6	Quatsino (Port McNeill)	0	0	0	0	0
	10	Toba (Toba River)	0	0	0	0	0
	19	Tahsis (Gold River)	0	4	0	0	4
	24	Moresby (Q.C.I.)	0	0	0	0	0
	25	Naka (Port McNeill)	0	0	0	0	0
	26	Corporation of Mission	0	0	0	0	0
	37	Nimkish	0	0	0	0	0
	38	Squamish (Squamish River)	0	0	0	0	0
	39	Haida (Powell River, all divisions)	0	0	0	0	0
	43	Fraser/Hanathko/Kingcome	0	0	0	0	0
	44	Alberni (Port Alberni)	0	341	0	0	341
	45	Cordera–Knight (all divisions)	0	0	0	0	0
	46	Maquinna (west coast, all divisions)	0	0	0	0	0
	47	Duncan Bay (all divisions)	0	0	0	0	0
Total TFL			0	345	0	0	345
Total region			**19**	**561**	**48**	**25**	**653**

[a] Summary for Crown land only and includes timber supply areas and tree farm licences. Data derived from hand compiled TFL summaries and the Ministry of Forests' ISIS. Backlog NSR represents net NSR after deductions as per Appendix 3. The totals for Appendix 2 and Appendix 3 are generated from different ISIS queries. Small differences in totals are attributable to differences in rounding errors between the two queries.

Summary of Net-down Process for Backlog* NSR

Pre-1982

Pre-1982 site class	Gross[a] area (ha)	Area deducted: Inoper.[b] NSR (ha)	Non-clearcut[c,d] (ha)	NSR <12 yrs[e] >700 ws/ha (ha)	NSR ≥12 yrs[f] >500 ws/ha (ha)	Total[g] for area <5 ha (ha)	Total area deducted	TSA[h] net area NSR (ha)	TFL[i] net area NSR (ha)	Total[j] net area NSR (ha)	Total net good & medium	Total gross good & medium
Province												
G	18083	1761	1026	7	160	464	3418	11300	3365	14665	55421	78959
M	60877	12244	5606	0	495	1775	20120	32023	8734	40757		
P	47080	25018	1422	15	15	409	26879	19675	526	20201		
L	4609	626	59	0	0	20	705	3521	383	3904		
Total	130649	39649	8113	22	671	2668	51122	66518	13008	79526		
Cariboo												
G	1374	174	39	0	141	56	410	924	40	964	3660	6001
M	4627	888	736	0	85	223	1932	1567	1129	2696		
P	1295	405	225	0	6	65	701	594	0	594		
L	0	0	0	0	0	0	0	0	0	0		
Total	7296	1467	1000	0	231	344	3042	3085	1169	4254		
Kamloops												
G	260	31	49	7	0	9	96	151	14	165	1758	3183
M	2923	235	825	0	83	187	1330	1379	214	1593		
P	1091	621	295	0	0	35	952	139	0	139		
L	13	0	10	0	0	3	13	0	0	0		
Total	4288	887	1180	7	83	234	2391	1669	228	1897		
Nelson												
G	1273	384	162	0	5	65	616	473	184	657	3753	8402
M	7129	2742	932	0	70	289	4033	2462	634	3096		
P	2751	1124	743	0	9	86	1962	539	250	789		
L	459	33	19	0	0	0	53	23	383	406		
Total	**11612**	**4283**	**1857**	**0**	**84**	**440**	**6664**	**3497**	**1451**	**4948**		

continued...

Pre-1982 (continued)

Pre-1982 site class	Gross[a] area (ha)	Area deducted: Inoper.[b] NSR (ha)	Non-clearcut[c,d] (ha)	NSR <12 yrs[e] >700 ws/ha (ha)	NSR ≥12 yrs[f] >500 ws/ha (ha)	Total[g] for area <5 ha (ha)	Total area deducted	TSA[h] net area NSR (ha)	TFL[i] net area NSR (ha)	Total[j] net area NSR (ha)	Total net good & medium	Total gross good & medium
Prince George												
G	12077	262	539	0	6	221	1027	7933	3117	11050	39233	44934
M	32857	875	2800	0	228	771	4674	22622	5561	28183		
P	13752	2530	60	0	0	115	2705	10787	260	11047		
L	3636	164	0	0	0	0	164	3471	0	3471		
Total	62322	3831	3399	0	233	1107	8570	44814	8938	53752		
Prince Rupert												
G	2998	844	237	0	9	97	1187	1811	0	1811	5413	14630
M	11632	7486	303	0	9	232	8030	3558	45	3603		
P	27822	20316	98	0	0	44	20458	7364	0	7364		
L	471	428	30	0	0	13	471	0	0	0		
Total	42924	29074	668	0	18	386	30146	12732	45	12777		
Vancouver												
G	102	65	0	0	0	17	83	9	10	19	1605	1810
M	1708	18	10	0	21	73	122	435	1151	1586		
P	368	23	0	15	0	63	101	251	16	267		
L	30	0	0	0	0	4	4	26	0	26		
Total	**2208**	**107**	**10**	**15**	**21**	**157**	**310**	**721**	**1177**	**1898**		

* Backlog – areas denuded prior to 1982.

a Column "Gross area" represents gross NSR as recorded in ISIS and hand complied TFL submissions.

Net-down Criteria:

b Inoperable NSR refers to areas that are untreatable due to inaccessibility or uneconomical conditions.

c Refers to areas logged by the selection silviculture system and are assumed to regenerate naturally.

d Refers to areas logged by the shelterwood and seed tree silviculture systems and are also assumed to regenerate naturally.

e Includes all NSR areas with an average tree age of less than 12 years and stocking levels greater than 700 well-spaced trees per hectare, these areas now meet provincial minimum stocking standards.

f Includes all NSR areas with an average tree age of more than 12 years and stocking levels greater than 500 well-spaced stems per hectare, these areas are considered a low priority for treatment.

g Includes all NSR areas less than 5 hectares in size, these areas will regenerate naturally or are considered a low priority for treatment or uneconomic for treatment.

h ISIS was used to generate net TSA backlog NSR statistics for all regions and were current to February 22, 1997.

i Tree farm license NSR was derived from hand complied backlog NSR submissions.

j Column "Total net area" represents the net NSR after deductions.

Summary of Net-down Process for Backlog* NSR

1982–87

1982–87 site class	Gross[a] area (ha)	Area deducted: Inoper.[b] NSR (ha)	Non-clearcut[c,d] (ha)	NSR <12 yrs[e] >700 ws/ha (ha)	NSR ≥12 yrs[f] >500 ws/ha (ha)	Total[g] for area <5 ha (ha)	Total area deducted	TSA[h] net area NSR (ha)	TFL[i] net area NSR (ha)	Total[j] net area NSR (ha)	Total net good, med., & poor	Total gross good, med., & poor
Province												
G	6971	1828	492	0	28	373	2721	3948	302	4250	40548	59881
M	35875	7594	2296	141	94	1561	11686	22422	1767	24189		
P	17035	4008	562	8	0	348	4925	12037	73	12110		
L	827	598	19	0	0	3	620	207	0	207		
Total	60708	14028	3370	148	123	2284	19953	38614	2142	40756		
Cariboo												
G	585	0	112	0	0	87	200	376	10	386	4545	5672
M	3009	95	261	29	34	305	724	2126	160	2286		
P	2077	0	64	8	0	132	204	1873	0	1873		
L	21	0	0	0	0	3	3	18	0	18		
Total	5693	95	437	37	34	527	1130	4393	170	4563		
Kamloops												
G	750	24	251	0	28	33	335	415	0	415	2175	3598
M	2556	22	602	0	0	315	938	1578	40	1618		
P	292	19	117	0	0	14	150	142	0	142		
L	0	0	0	0	0	0	0	0	0	0		
Total	3598	65	970	0	28	361	1424	2135	40	2175		
Nelson												
G	815	440	100	0	0	54	595	83	137	220	1988	6983
M	4108	1260	1233	0	0	170	2664	1037	407	1444		
P	2060	1312	375	0	0	49	1736	303	21	324		
L	30	0	19	0	0	0	19	11	0	11		
Total	7013	3012	1728	0	0	273	5014	1434	565	1999		

continued...

1982–87 (continued)

1982–87 site class	Gross[a] area (ha)	Area deducted: Inoper.[b] NSR (ha)	Non-clearcut[c,d] (ha)	NSR <12 yrs[e] >700 ws/ha (ha)	NSR ≥12 yrs[f] >500 ws/ha (ha)	Total[g] for area <5 ha (ha)	Total area deducted	T.S.A.[h] net area NSR (ha)	T.F.L.[i] net area NSR (ha)	Total[j] net area NSR (ha)	Total net good, med., & poor	Total gross good, med., & poor
Prince George												
G	4067	1318	9	0	0	144	1470	2442	155	2597	28057	34882
M	21390	4259	99	52	60	550	5020	15598	772	16370		
P	9425	227	0	0	0	108	335	9043	47	9090		
L	486	424	0	0	0	0	424	62	0	62		
Total	35368	6229	108	52	60	801	7249	27145	974	28119		
Prince Rupert												
G	730	46	20	0	0	50	116	614	0	614	3156	7979
M	4138	1958	101	27	0	141	2228	1867	43	1910		
P	3112	2450	0	0	0	30	2480	627	5	632		
L	265	174	0	0	0	0	174	91	0	91		
Total	8244	4628	121	27	0	222	4998	3199	48	3247		
Vancouver												
G	24	0	0	0	0	5	5	19	0	19	628	767
M	673	0	0	33	0	80	112	216	345	561		
P	70	0	6	0	0	15	21	48	0	48		
L	25	0	0	0	0	0	0	25	0	25		
Total	792	0	6	33	0	100	139	308	345	653		

* Backlog – areas denuded between January 1, 1982 and October 1, 1987.

a Column "Gross area" represents gross NSR as recorded in ISIS and hand complied TFL submissions.

Net-down Criteria:

b Inoperable NSR refers to areas that are untreatable due to inaccessibility or uneconomical conditions.

c Refers to areas logged by the selection silviculture system and are assumed to regenerate naturally.

d Refers to areas logged by the shelterwood and seed tree silviculture systems and are also assumed to regenerate naturally.

e Includes all NSR areas with an average tree age of less than 12 years and stocking levels greater than 700 well-spaced trees per hectare, these areas now meet provincial minimum stocking standards.

f Includes all NSR areas with an average tree age of more than 12 years and stocking levels greater than 500 well-spaced stems per hectare, these areas are considered a low priority for treatment.

g Includes all NSR areas less than 5 hectares in size, these areas will regenerate naturally or are considered a low priority for treatment or uneconomic for treatment.

h ISIS was used to generate net TSA backlog NSR statistics for all regions and were current to February 22, 1997.

i Tree farm license NSR was derived from hand complied backlog NSR submissions.

j Column "Total net area" represents the net NSR after deductions.

Appendix 4 Summary of Impeded Land by Forest Region and TSA

Cariboo Forest Region – Summary of impeded[a] land

TSA	TSA name	Gross not free growing pre-1987[b]	1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
23	100 Mile House	60 512	33 819	20 046	734	4258	58 857
26	Quesnel	96 798	54 128	34 426	5816	1784	96 154
29	Williams Lake	200 565	64 685	78 707	13 033	30 554	186 979
Total		**357 875**	**152 632**	**133 179**	**19 583**	**36 596**	**341 990**

[a] Impeded land is satisfactorily restocked, operable area, but either not free growing or not declared free growing.
[b] Gross not free growing pre-1987 is the total not free growing area before deductions of NSR and net downs.

Kamloops Forest Region – Summary of impeded[a] land

TSA	TSA name	Gross not free growing pre-1987[b]	1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
11	Kamloops	139 152	41 158	59 568	7554	20 300	128 580
15	Lillooet	19 637	4339	5733	2323	3368	15 763
18	Merritt	38 495	12 720	19 314	2785	3590	38 409
22	Okanagan	156 732	44 105	81 249	9047	14 983	149 384
Total		**354 016**	**102 322**	**165 864**	**21 709**	**42 241**	**332 136**

[a] Impeded land is satisfactorily restocked, operable area, but either not free growing or not declared free growing.
[b] Gross not free growing pre-1987 is the total not free growing area before deductions of NSR and net downs.

Appendix 4 Continued

Nelson Forest Region – Summary of impeded[a] land

TSA	TSA name	Gross not free growing pre-1987[b]	1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
1	Arrow	28 900	7756	13 047	3857	2393	27 053
2	Boundary	27 123	14 943	9764	1327	601	26 635
5	Cranbrook	96 052	35 623	40 325	4366	14 898	95 212
7	Golden	59 027	10 623	33 507	3860	5406	53 396
9	Invermere	71 338	38 711	18 681	7383	4241	69 016
13	Kootenay Lake	50 161	10 099	24 364	5042	3495	43 000
27	Revelstoke	15 539	3014	6325	527	517	10 383
Total		**348 140**	**120 769**	**146 013**	**26 362**	**31 551**	**324 695**

[a] Impeded land is satisfactorily restocked, operable area, but either not free growing or not declared free growing.
[b] Gross not free growing pre-1987 is the total not free growing area before deductions of NSR and net downs.

Prince George Forest Region – Summary of impeded[a] land

TSA	TSA name	Gross not free growing pre-1987[b]	1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
8	Fort Nelson	44 742	20 845	22 197	442	431	43 915
16	Mackenzie	376 546	50 727	92 398	3163	135 670	281 958
17	Robson Valley (McBride)	19 899	9082	7069	650	1986	18 787
24	Prince George	504 223	141 966	199 936	66 755	79 901	488 558
40	Fort St. John	79 782	35 661	33 408	7164	2978	79 211
41	Dawson Creek	85 849	35 369	35 740	2333	10 375	83 817
Total		**1 111 041**	**293 650**	**390 748**	**80 507**	**231 341**	**996 246**

[a] Impeded land is satisfactorily restocked, operable area, but either not free growing or not declared free growing.
[b] Gross not free growing pre-1987 is the total not free growing area before deductions of NSR and net downs.

Appendix 4 Continued

Prince Rupert Forest Region – Summary of impeded[a] land

TSA	TSA name	Gross not free growing pre-1987[b]	1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
3	Bulkley	26 394	7805	9690	7573	1090	26 158
4	Cassiar	74 480	31 174	997	852	4800	37 823
10	Kalum	26 341	4576	12 499	3637	2440	23 152
12	Kispiox	28 421	11 258	11 772	3634	1316	27 980
14	Lakes	33 208	19 632	10 235	1192	1928	32 987
20	Morice	50 040	24 176	18 614	4214	954	47 958
21	North Coast	30 551	4362	4862	1205	16 088	26 517
42	Cranberry	5602	2314	1837	733	698	5582
43	Nass	20 517	10 992	2037	25	4259	17 303
Total		**295 554**	**116 289**	**72 543**	**23 055**	**33 573**	**245 460**

[a] Impeded land is satisfactorily restocked, operable area, but either not free growing or not declared free growing.
[b] Gross not free growing pre-1987 is the total not free growing area before deductions of NSR and net downs.

Vancouver Forest Region – Summary of impeded[a] land

TSA	TSA name	Gross not free growing pre-1987[b]	1982–1987	1970–1982	Pre-1970 (FRDA funded)	Pre-1970 (not FRDA funded)	Total
19	Mid-coast	8191	6367	1140	632	53	8192
25	Queen Charlotte	2858	2806	52	0	0	2858
30	Fraser	59 215	14 966	18 090	21 794	4080	58 930
31	Soo	22 147	5996	8097	5516	2380	21989
33	Kingcome	21 157	8591	7072	3613	1840	21 116
37	Strathcona	5481	5012	328	58	26	5424
38	Arrowsmith	8271	4516	2617	795	278	8206
39	Sunshine Coast	3228	1612	493	878	164	3147
Total		**130 548**	**49 866**	**37 889**	**33 286**	**8821**	**129 862**

[a] Impeded land is satisfactorily restocked, operable area, but either not free growing or not declared free growing.
[b] Gross not free growing pre-1987 is the total not free growing area before deductions of NSR and net downs.

Appendix 5 Glossary

Backlog NSR

An area:

- from which the timber was harvested, damaged or destroyed before October 1, 1987, and
- that, in the district manager's opinion, is insufficiently stocked with healthy, well-spaced trees of a commercially acceptable species.

Current productive and available forest land

The forest land base remaining after reductions are made for environmentally sensitive areas (ESAs) and the permanent forest land alienations anticipated over the next 20 years, (as per the 1984 *Forest and Range Resource Analysis*).

Gross backlog NSR

Total backlog NSR before deductions.

Impeded area

An area:

- from which the timber was harvested, damaged or destroyed before October 1, 1987, and
- that, in the district manager's opinion, is satisfactorily restocked with healthy, well-spaced trees of a commercially acceptable species, but not free growing or not declared free growing.

NC brush

Non-commercial brush. Areas that have been 60% or more covered by brush one or more metres high.

Net NSR

NSR remaining after deductions are made for areas that are uneconomic, inaccessible, inoperable, of poor or low site classes (NSR), are likely to naturally regenerate, or are satisfactorily restocked (SR) based on the backlog stocking standards.

Not stocked forest land

Not stocked includes NSR areas on which forest stands have been disturbed by harvesting, wildfire or other causes and have not been restocked with sufficient trees of acceptable, commercial species. The area for NSR lands includes current and backlog (pre-1982 and 1982–1987) NSR. Also includes non-commercial areas with forest cover and non-commercial brush areas that have been 60% or more covered by brush one or more metres high.

NSR

Not satisfactorily restocked. Forest lands that are not growing to their full potential due to an insufficient stocking of acceptable commercial tree species.

Productive forest land

Forest land that is capable of producing a merchantable stand within a reasonable length of time.

Site class

A measure of forest site productivity as determined by site index. In this publication, the site classes are good, medium, poor and low.

Appendix 5 Continued

TFL

Tree farm licence. Privately managed, area-based, sustained yield units in which the Crown adds forest land to the company's private holdings (if any), sufficient to provide a continuous supply of wood for an existing or planned mill.

Treatable NSR

Represents the portion of net NSR that is potentially treatable given present management constraints.

TSA

Timber supply area. An area of the province created by the Ministry of Forests for the purpose of analysis, planning and management of timber resources. Boundaries have been determined on the basis of present and expected population centres, transportation networks, manufacturing facilities and existing administrative boundaries.